



CITY OF MANCHESTER.

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# REPORT

ON THE

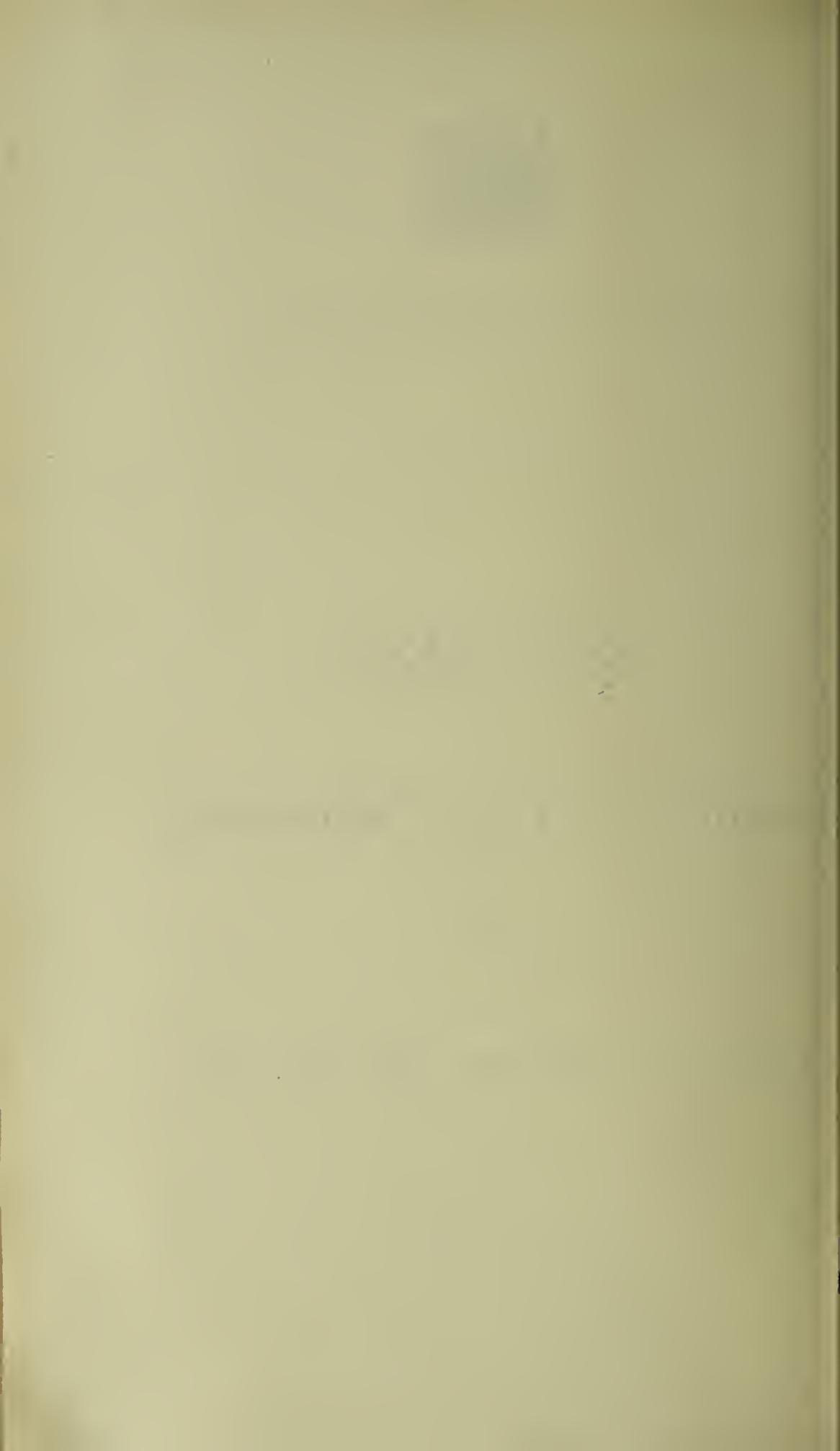
Health of the City of Manchester,

1927,

BY

R. VEITCH CLARK, M.A., M.B., CH.B., B.Sc.

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PUBLIC HEALTH OFFICE,  
 CIVIC BUILDINGS,  
 1, MOUNT STREET, MANCHESTER,

August, 1928.

MY LORD MAYOR, ALDERMEN,  
 AND MEMBERS OF THE CITY COUNCIL,

I beg to present my report on the health of the City of Manchester for the year 1927.

The various sections of the work are dealt with fully in the body of the report, and the index will enable easy reference to be made to any special part of the work.

The City Council will remember that the Right Hon. Neville Chamberlain, M.P., Minister of Health, visited Manchester in October, 1927, in the course of a series of visits paid by him to several provincial cities. By personal inspection he saw a large proportion of the public health activities of the City, and expressed his deep interest in, and appreciation of, what is being done by the City Council.

*Birth Rate.*

The birth rate for 1927 was 17.1 per thousand of the population. This is the lowest record since 1918, which was the lowest record of the war years. There appears to be no special significance in this figure, in so far as Manchester is concerned, as distinguished from the country generally.

*Death Rate.*

The death rate for 1927 was 13.77 per thousand of the population. In 1926 the death rate was 13.17.

The slight increase of the 1927 death rate over that of 1926 is in part, if not wholly, accounted for by the high mortality from influenza and pneumonia which occurred during the six weeks ended March 19th. The weekly average of deaths from influenza for the year was 9. For the six weeks referred to the corresponding figure was 48. The corresponding figures for pneumonia are 18 and 45.

Table F, page 20, gives an interesting summary of death rates from the principal killing diseases from the year 1881. As pointed out last year, the three groups of diseases in which there are definite increases are :—

*Cancer* : the deaths from which have multiplied three times during these 47 years ;

*Diseases of the Heart and Blood Vessels* : in which the deaths have multiplied about two-and-a-half times ; and

*Deaths from conditions associated with Childbirth* : the death rates from which show a fluctuating figure, but with a definite rising tendency.

Already a definite campaign against cancer has been developed in Manchester. The Manchester Committee on Cancer is representative of those bodies and institutions more intimately associated with cancer work in the City and a special report on pages 244-245 outlines briefly the work now in progress. It will be noted that Lancashire's special problem of mule-spinners' cancer is the focus of the special research work undertaken by the Committee. In view of the great need for such work, and the larger effort now being made to bring the resources of Lancashire and Cheshire more fully into the field of the treatment and prevention of cancer, particular attention is directed towards these pages.

Maternal mortality is referred to in the paragraph on maternity and child welfare.

The deaths from disease of the heart and blood vessels constitute a group which, when properly regarded, opens up many avenues for future work in public health. For the moment it is necessary to realise that associated with heart disease, and acting as the direct cause in a great proportion of cases, we have, on the one hand, bronchitis and similar respiratory diseases (a group of ailments of special significance in this area), and on the other hand, rheumatism, the most common of all causes of organic disease of the heart, and which is in itself an illness almost without rival as a cause of incapacitation.

All the other principal causes of death show a definite decrease.

#### *Infant Mortality.*

The rate of infant mortality for 1927 was 85·77 per thousand births, as compared with the 1926 figure of 86·62. It is the lowest rate that has been recorded in the City. The infant mortality rate amongst legitimate births was 84 per thousand and amongst illegitimate 126 per thousand. The great decrease in infant mortality during the present century is shown in the last column of Table E, page 19.

#### INFECTIOUS DISEASES.

##### *Smallpox.*

In the latter portion of the year an outbreak of smallpox occurred in the City, 36 notifications being received up to 31st December. Details of the outbreak are recorded on pages 25-26. The disease was of the mild type now prevalent in England. The mortality was nil, but a considerable number of the cases were severely ill and exhibited distressing complications.

It will be observed from the report referred to that no persons who had been vaccinated recently had contracted the disease, and it is important to emphasise once more the fact that vaccination is an absolutely safe and effective protection against smallpox. The permissive clauses of the Vaccination Acts are, both from the economic and social point of view, a serious blot upon the public health legislation of the country.

### *Enteric Fever.*

Eighteen cases were notified during the year. These include both the cases of true enteric fever or typhoid fever, and para-typhoid fever, which, epidemiologically, are grouped together. This is by far the lowest number ever recorded in the City, the nearest being 30 cases in 1926.

### *Scarlet Fever.*

During the year 1,823 cases were notified. This is the lowest figure since 1924, when 1,784 cases were notified.

### *Diphtheria.*

1,208 cases were notified, with a case mortality rate of 8·3 per cent. This number is the highest yet recorded in the City. The fatality rate is the lowest with the exception of the year 1920, when it was 7·3 per cent.

It was hoped that during 1927 a general offer of immunisation against diphtheria would be made to the public. It was not, however, possible to institute this during these twelve months as a general public health provision. An account, however, is given in the section dealing with diphtheria of some work which was carried out purely departmentally as a preliminary to the institution of the general offer of such immunisation to the inhabitants of the City, as has now been authorised by the City Council.

### *Tuberculosis.*

The report on tuberculosis gives very fully the position of our knowledge of this disease in the City, and calls for no special comment here.

The extension of the Sanatorium at Abergele is being proceeded with. Contracts for the buildings have been let and the contractor is now engaged on the actual work of construction.

### *Monsall Hospital.*

In the report of the work done during the year at Monsall Hospital, much the most important sections, in so far as development and improvement of the work is concerned, are those relating to the treatment of infectious diseases by serums, the protection of the staff against scarlet fever and diphtheria by active immunisation, and the use of various sera to prevent cross-infection amongst the patients in the wards. A very important development also is the use of anti-sera in scarlet fever amongst patients who do not acquire immunity during the course of the disease.

It is of great importance in the public health interest that the recent development in connection with the treatment and prevention of infectious diseases should be widely known. For this reason special attention is directed to the report of the work done at Monsall Hospital. The curative and preventive work is being maintained at a very high level, and is in constant touch with the most recently acquired scientific knowledge and methods.

The report upon the treatment of puerperal fever in the hospital continues to show favourable results, based upon the application of the most recent methods of treating this very grave malady.

#### *Maternity and Child Welfare.*

The administrative work of this section calls for no special comment beyond that which is to be found in the body of the report. There have been several developments during the year, but these are all in the nature of improvements to or extensions of the existing activities. The main features in the vital statistics of this section are the continual fall in infant mortality and the increase which is to be recorded in the deaths of mothers due to illness arising out of childbirth. Considerable reference was made in the report for 1926 to maternal mortality and the work which it would be necessary to undertake to combat a loss of such serious significance to the nation, as represented by the deaths of women during the child-bearing period of life. The maternal mortality rate for 1927 was 4·81, as compared with 4·58 for 1926.

The figures given in Table F, page 20, show that the averages for the five year periods exhibit only one return higher than that of the present year viz., a rate of 6·17 for the five years 1891-95. It is, therefore, again my duty to direct the special attention of the City Council to this return, and to emphasise once more the need for a greater development of our ante-natal work in conjunction with our medical practitioners and midwives on the one hand and the larger maternity institutions on the other. The Public Health Committee are realising this in a practical manner by an active policy of an increase in the ante-natal work in the centres in the City, but it is desirable that it should be realised that for an efficient reduction in the maternal mortality rate it must be the settled policy of the City to proceed uninterruptedly with this special phase of activity.

#### *Housing.*

The position of the housing problem in the City during the year 1927 is sufficiently detailed in the special report on housing in Manchester on the date September 30th, 1927, prepared for the consideration of the City Council. This report appears in full on pages 230-239. The record of houses built in the City during the year is shown on page 205.

*Smoke Regional Committee.*

The report of the work of this Committee is shown on pages 240-244. In the annual report for 1926 it was recorded that the original object of forming a Statutory Regional Smoke Committee (which would, if constituted, administer the legislative powers for the abatement of the smoke nuisance over the major portion of the South-East Lancashire industrial area) is not feasible at the present time. This Regional Committee, therefore, has been reconstituted as an advisory body, and in the report referred to will be found a list of authorities who have agreed to combine in this matter. The report is in condensed form, and cannot give an adequate presentation of the amount of time and consideration given to this very important public health problem.

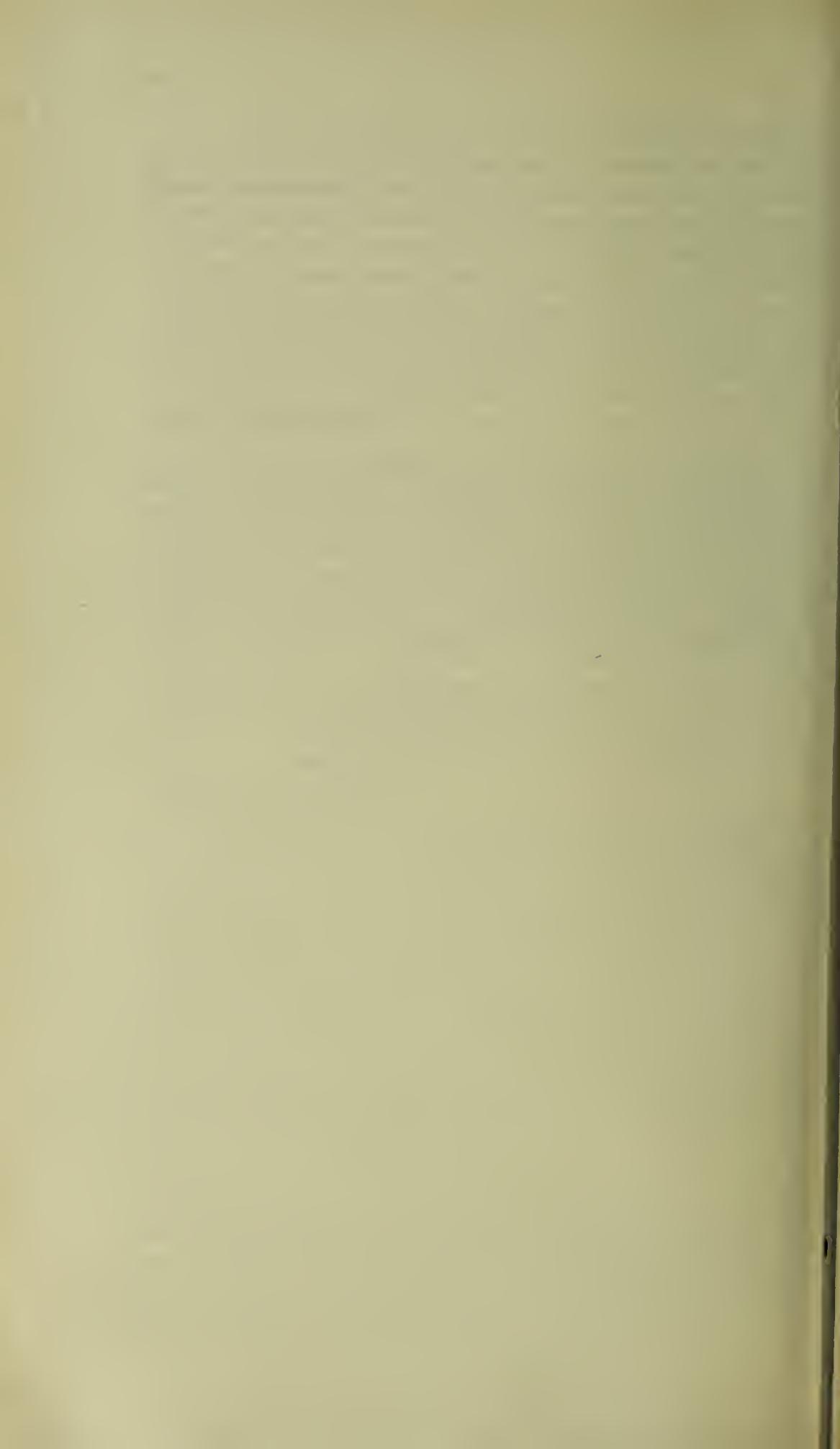
The adoption of a uniform standard of administration, the framing of statutory bye-laws for the control of the smoke nuisance, the best methods of administering the new powers conferred by the Public Health (Smoke Abatement) Act, 1926, have all been extensively considered, and there is no doubt but that the Regional Committee is a body destined to exercise a very great influence for good in the reduction of this serious menace to public health in Manchester and the surrounding districts.

I have the honour to be,

Your obedient Servant,

R. VEITCH CLARK,

*Medical Officer of Health.*



## STATISTICAL.

The following are general statistics for the year 1927:—

No. of occupied undivided private houses at the Census in June,		
	1921 .....	141,311
" " " "	tenements, blocks of flats, shops, etc., at the Census in June,	
	1921. ....	155,017
No. of persons per occupied undivided private house (Census 1921)	4.35	
" " all occupied dwellings (Census 1921) .....	4.71	
" " " " 1927 (Based on 172,700 houses supplied by the Waterworks Department) .....	4.43	
No. of new houses erected during 1927:—		
By Local Authority .. . . . .	2,240	
By other bodies or persons .. . . . .	2,221	
Total .. . . . .	4,461	

## CITY OF MANCHESTER (299, OLDHAM ROAD)—METEOROLOGY, 1927. (Means of the Monthly Readings.)

Barometer	Dry Bulb	Wet Bulb	Humidity	Temperature	Minimum Temperature	Mean Temperature in Shade	Maximum Temperature in Sunshine	Crass Minimum	One Foot	Four Feet	Total Rainfall (inches)	No. of Wet Days	Total Sunshine Hours	Average Daily Sunshine from 1881-1915	Average Daily Rainfall 1892-1927	Average Hours of Sunshine 1892-1927	Fog Noted		
January ..	29.726	40.9	39.4	87	44.7	36.7	40.7	52.7	35.5	39.4	43.7	4.21	26	8.8	39.1	2.89	10.46		
February ..	30.079	39.9	38.5	87	45.0	36.5	40.8	58.2	34.9	38.1	42.5	1.62	14	17.4	40.1	2.42	29.83	11th, 16th, and 17th, and 18th	
March ..	29.674	44.6	42.2	81	50.3	39.8	45.1	78.8	38.6	43.0	44.3	4.23	25	63.1	42.3	2.47	72.84		
April ..	29.928	46.3	43.0	75	52.1	40.4	46.3	88.5	39.5	45.6	46.3	2.40	22	107.4	46.8	1.99	115.93		
May ..	30.090	52.8	47.9	68	60.1	45.1	52.6	95.0	42.7	51.3	49.7	1.39	15	120.4	52.6	2.35	144.03		
June ..	29.884	55.2	50.3	70	61.1	48.1	54.6	101.2	45.6	55.6	53.3	4.52	19	126.9	58.4	2.31	150.37		
July ..	29.886	58.1	57.7	79	68.7	54.9	61.8	104.2	53.0	60.3	56.8	2.48	22	98.0	60.8	2.90	139.84		
August ..	29.727	61.6	57.4	77	67.2	54.9	61.1	100.9	52.8	61.5	59.7	5.96	22	97.9	59.9	3.57	117.24		
September ..	29.752	55.5	52.7	83	60.3	49.7	55.0	87.6	46.2	56.9	58.3	5.76	21	75.6	56.4	2.65	97.97		
October ..	30.018	51.1	49.2	87	56.7	45.6	51.2	75.2	42.1	50.1	53.8	2.77	18	53.0	49.8	3.26	55.30		
November ..	29.963	43.1	41.5	87	47.5	38.7	43.1	59.1	37.8	43.7	50.0	3.51	20	29.4	43.6	2.65	18.20	27th	
December ..	29.942	37.4	35.8	85	40.0	33.8	36.9	45.5	33.9	37.7	45.3	9.05	14	11.6	40.4	3.47	6.66		
YEAR	29.889	49.2	46.3	81	54.5	43.7	49.1	78.9	41.9	41.1	39.80	50.3	48.6	80.5	23.8	49.2	32.93	95.67	

The extent to which Institutions are used is to some extent represented in the following table:—

TABLE I.

DEATH-RATES IN THE HOMES OF THE PEOPLE AND IN INSTITUTIONS  
FOR 5 YEARS 1923-1927.

YEAR	Estimated Populations to middle of Year	Death-rate per 1000 of persons dying in their own homes	Death-rate per 1000 of persons dying in Institutions	Total death-rate per 1000
1923 .. ..	752,100	8.42	4.90	13.32
1924 .. ..	755,119	8.70	5.25	13.95
1925 .. ..	758,235	8.67	5.73	14.40
1926 .. ..	761,320	8.01	5.16	13.17
1927 .. ..	764,420	7.90	5.78	13.77

The chief causes of death are shown below for each of the years 1922-1927:—

TABLE 2.

	1922	1923	1924	1925	1926	1927
Tuberculosis of the Lungs .....	947	931	906	997	905	881
Tuberculosis of Organs other than the Lungs .....	242	221	229	184	170	172
Diseases of the Heart .....	1087	1085	1123	1133	1104	1152
Cerebral Haemorrhage, Apoplexy, Hemiplegia.....	439	458	473	498	502	422
Pneumonia .....	1024	974	1023	961	799	952
Bronchitis .....	1277	1091	1234	1371	1065	1194
Digestive Organs .....	310	391	339	364	348	323
Atrophy, Debility (chiefly in infants) .....	114	86	105	69	56	42
Old Age .....	467	421	353	459	435	353
Premature Birth.....	310	277	299	281	254	250
Nephritis and Bright's Disease	289	243	273	243	255	275
Convulsions.....	53	63	81	69	59	59
Inflammation of the Brain .....	51	52	43	39	34	34
Diarrhoea and Dysentery.....	191	202	212	230	237	118
Measles .....	354	83	370	129	156	164
Scarlet Fever .....	62	31	32	56	25	20
Whooping Cough .....	99	184	116	206	61	124
Diphtheria .....	82	47	62	102	103	91
Influenza.....	393	281	342	262	214	455
Malignant Disease.....	955	1049	1050	1055	1099	1083

The following figures show the gains and losses in the death-rates in 1927 over the average of the previous ten years:—

Table 3.

*Gains and Losses in 1927 per 1,000 persons living, as compared with the average for the 10 years 1917-1926.*

*Gains.*

Measles	0.03
Scarlet Fever	0.02
Enteric Fever	0.01
Whooping Cough	0.02
Influenza	0.08
Diarrhoeal Diseases	0.11
Pyæmia and Septicæmia	0.10
Phthisis	0.13
Tubercular Diseases (other)	0.09
Nervous Diseases	0.05
Premature Birth	0.06
Pneumonia	0.05
Respiratory Diseases (other)	0.01
Digestive System	0.06
Old Age	0.10
	—
Total	0.83

*Losses.*

Erysipelas	0.02
Diphtheria	0.03
Cancer	0.17
Rheumatic Fever	0.02
Diseases of the Heart and Blood Vessels	0.49
Bronchitis	0.02
Urinary System	0.01
	—
Total	0.76
	—
Balance of Gain from above Causes	0.07
,,     ,,     ,,     all Causes	0.09

## INFANTILE MORTALITY

The figures relating to infantile mortality, divided into those concerning the first and second trimesters and the last six months of the first year, are shown in Table 4.

TABLE 4.—INFANTILE MORTALITY.

*Deaths per 1,000 births at the ages 0-2 months, 3-5 months, and 6-11 months, in successive years.*

YEARS	Months of Age			
	0-2	3-5	6-11	Under 1 year
1891-1895 (mean) ..	82·79	40·99	62·97	186·75
1896-1900 (mean) ..	83·44	42·43	66·28	192·16
1901-1905 (mean) ..	81·02	37·52	54·24	172·78
1906-1910 (mean) ..	73·89	29·12	44·27	147·28
1911-1915 (mean) ..	69·23	24·38	39·26	132·88
1916-1920 (mean) ..	58·46	17·72	28·65	104·82
1921-1925 (mean) ..	52·46	15·63	27·38	95·45
1926 .. .. .. ..	49·14	14·62	22·86	86·62
1927 .. .. .. ..	48·62	13·84	23·31	85·77

Table 5 allows a comparison with former years in respect of the infantile mortality rates from different causes for the whole of the first year of life.

TABLE 5.

## CITY OF MANCHESTER.

CAUSES OF DEATH	DEATHS UNDER ONE YEAR PER 1,000 BIRTHS					
	1922	1923	1924	1925	1926	1927
All causes .. . . . .	96.18	88.19	100.13	95.77	86.62	85.77
Smallpox .. . . . .	..	..	..	..	..	..
Chickenpox .. . . . .	0.19	..	..	0.14	0.29	0.15
Measles .. . . . .	5.68	0.91	4.77	1.91	2.29	3.44
Scarlet Fever .. . . . .	0.19	0.13	0.07	0.07	..	0.23
Whooping Cough .. . . . .	2.14	4.81	2.52	5.95	2.08	3.67
Diphtheria .. . . . .	0.76	0.19	0.34	0.64	0.72	0.92
Erysipelas .. . . . .	..	0.13	0.20	0.50	0.21	0.31
Tuberculous Meningitis .. . . . .	1.26	1.17	0.82	0.57	0.79	0.38
Abdominal Tuberculosis .. . . . .	0.44	0.39	0.20	0.28	0.22	0.15
Other Tuberculous Diseases .. . . . .	0.38	0.32	0.82	0.50	0.50	0.38
Meningitis ( <i>not Tuberculous</i> ) .. . . . .	1.07	0.91	0.95	0.64	0.64	0.46
Convulsions .. . . . .	2.84	3.38	4.29	4.39	3.08	3.97
Laryngitis .. . . . .	0.13	..	0.14	..	..	..
Bronchitis .. . . . .	9.65	7.27	9.19	9.20	6.24	6.34
Pneumonia (all forms) .. . . . .	15.26	17.30	16.68	13.94	13.54	13.68
Diarrhoea and Enteritis .. . . . .	9.78	9.81	11.10	12.88	13.83	10.17
Gastritis .. . . . .	0.57	0.84	1.09	0.99	0.57	0.54
Syphilis .. . . . .	1.96	0.84	1.50	0.71	0.57	0.61
Rickets .. . . . .	0.19	0.32	0.20	0.35	0.36	0.08
Injury at Birth .. . . . .	1.07	1.23	2.38	2.19	2.58	2.60
Atelectasis .. . . . .	3.34	2.99	1.36	1.27	0.93	1.60
Congenital Malformation .. . . . .	4.42	4.03	5.65	6.02	6.88	6.19
Premature Birth .. . . . .	19.55	18.00	20.35	19.89	18.20	19.11
Atrophy, Debility, and Marasmus .. . . . .	6.94	5.20	6.74	4.88	3.94	2.98
Overlying, found dead in bed, and suffocation .. . . . .	1.70	0.78	1.43	0.57	1.15	0.46
Other causes .. . . . .	7.13	7.51	7.31	7.29	7.01	7.35

Herewith are given the tables of poor law relief :—

### AMOUNT OF POOR LAW RELIEF.

This is shown in the table on page 9, compiled from a monthly statement furnished to the Hospitals Sub-Committee. Further particulars are given in the statement below, obtained from the Clerk to the Manchester Guardians.

#### MANCHESTER UNION.

*Return relating to Sick Persons and Persons Suffering from Mental Infirmity Maintained by, or Chargeable to, the Guardians of the Poor of the Manchester Union on the 1st January, 1928.*

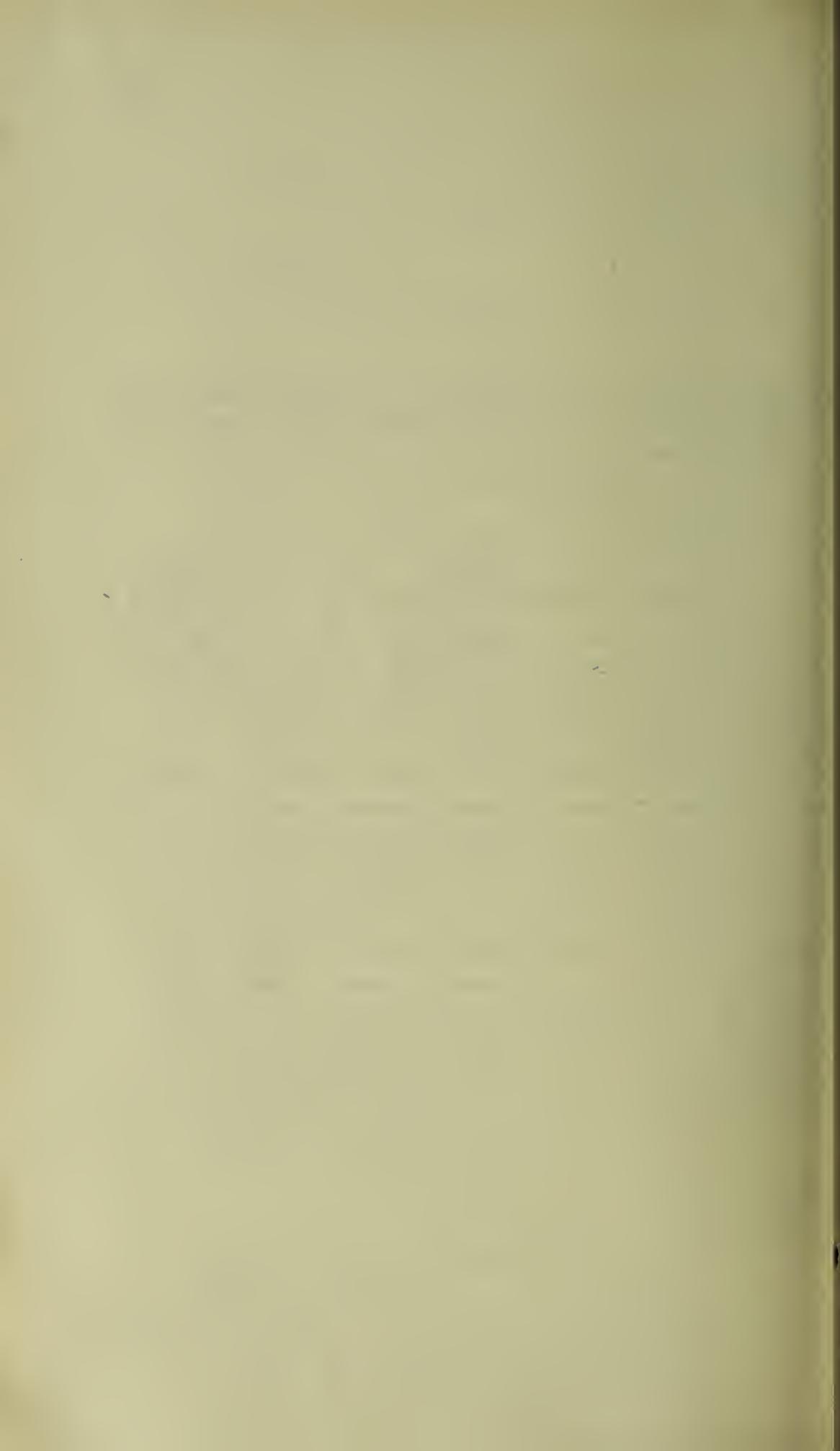
Institution	Class of Case Maintained	Sick	Suffering from Mental Infirmity
<b>1. Poor Law Establishments.</b>			
(a) Belonging to Manchester Union :—			
Crumpsall Infirmary (2,500).	General Hospital and Lunacy	1,479	599
Withington Hospital (1,670).	General Hospital .. .	1,269	—
Rosc Hill Convalescent Home (106).	Convalescent Children .	109	—
Booth Hall Infirmary (700).	General Hospital for Children	593	—
Langho Colony (620) . . .	Epileptic persons ..	—	614
Swinton Home (144) . . .	Mentally deficient children	—	104
(b) Belonging to other Unions :—			
Garstang . . . . .	Feeble-minded persons.	—	3
Ulverston Union . . . . .	” ” .	—	12
Lunesdale . . . . .	” ” .	—	12
West Derby . . . . .	Mentally deficient persons	—	2
Metropolitan Asylums Board (Whitcoak School)	Ophthalmic children ..	1	—
<b>2. Non-Poor Law Establishments.</b>			
(a) County Mental Hospitals :—			
Lancaster . . . . .	Lunatics . . . . .	—	366
Prestwich . . . . .	” . . . . .	—	876
Winwick . . . . .	” . . . . .	—	512
Whittingham . . . . .	” . . . . .	—	135
Rainhill . . . . .	” . . . . .	—	39
Menston . . . . .	” . . . . .	—	1
Colney Hatch . . . . .	” . . . . .	—	1
(b) Hospitals, Homes, and Schools :—			
St. John Baptist's Ophthalmia School, Chigwell	Ophthalmic Boys ..	1	—
Pen-y-Coed, Abergale . . .	Phthisical children ..	10	—
St. Anne's Ophthalmia School, London . . .	Ophthalmic persons ..	7	—
Margate Sea Bathing Hospital, Margate . . .	Convalescent .. .	1	—
Clayton Vale Hospital, Clayton, Manchester . . .	Smallpox .. . .	9	—
	Carricd forward . . .	3,479	3,276

Institution	Class of Case Maintained	Sick	Suffering from Mental Infirmitv
<i>Non Poor Law Establishments</i> (continued)— (b) <i>Hospitals, Homes, and Schools</i> — (continued)	Brought forward ..	3,479	3,276
St. Vincent's Hospice, Liverpool	Incurable .. . . .	1	—
St. Fechan's Sanatorium, Ecclefechan	Tubercular boys .. . .	10	—
Monsall Fever Hospital, Newton Heath	Infectious .. . . .	4	—
Dr. Garrett Memorial Home, Conway	Phthisical children ..	169	—
Royal Alexandra Hospital, Rhyl	Convalescent .. . .	3	—
St. Agnes Training School, Leyton	Feeble-minded women ..	—	1
Sandlebridge School, Alderley Edge	Mentally defective adults	—	8
All Souls' Special School, Hillingdon, Essex	Feeble-minded girls	—	3
Cumnor Rise Home, Botley, Oxford	Feeble-minded persons	—	3
Stoke Park Colony, Bristol.	Feeble-minded boys ..	—	32
Whittington Hall, Chesterfield	Mentally defective women	—	10
Pontville Home, Ormskirk ..	Feeble-minded boys ..	—	3
Durran Hill House, Carlisle.	Mentally defective women	—	10
St. Joseph's Home, Sudbury	Feeble-minded young women	—	2
Allerton Priory, Woolton, Lancs.	Feeble-minded children ..	—	1
Royal Albert Institution, Lancaster	Feeble-minded adults ..	—	10
David Lewis Epileptic Colony, Alderley Edge	Epileptics .. . . .	—	1
Starnthwaite Colony, Starnthwaite	" .. . . .	—	1
Home for Aged Needy and Incurable Jews	Incurable Jews .. . .	5	—
Eastby Sanatorium, Skipton, Yorkshire	Phthisical boys .. . .	15	—
Home for Incurables, Liverpool	Incurables .. . . .	1	—
St. Francis Roman Catholic Special School, Hillside House, Buntingford	Feeble-minded children ..	—	1
Seabright House, South Drive, St. Annes-on-Sea	Convalescent .. . .	5	—
Brabazon House, Reigate, Surrey	" .. . . .	3	—
Shropshire Orthopaedic Hospital, near Oswestry	Orthopaedic .. . . .	1	—
	Total .. . . .	3,696	3,362
Central Hall Macalpine Crossley Simpson Hill	Maternity cases .. . . .	1 1 2 1	— — — —

N.B.—The figures shown in brackets against the Institutions under heading 1 (a) represent the accommodation for the class referred to.

THE NUMBER OF PERSONS WHO WERE IN RECEIPT OF RELIEF FROM THE MANCHESTER  
BOARD OF GUARDIANS DURING THE LAST WEEK IN EACH MONTH OF THE  
YEARS 1927 AND 1926.

	1927			1926		
	Indoor	Out-Door	Sick Patients remaining in Guardians' Hospitals	Indoor	Out-Door	Sick Patients remaining in Guardians' Hospitals
January ..	7,913	33,620	2,884	7,495	25,617	2,643
February ..	8,009	33,180	3,101	7,553	25,574	2,777
March ..	7,838	32,578	2,827	7,425	25,077	2,693
April .. ..	7,579	30,919	2,803	7,344	25,107	2,730
May .. ..	7,359	30,040	2,766	7,195	33,933	2,691
June .. ..	7,251	30,866	2,615	7,275	33,089	2,767
July .. ..	7,281	29,698	2,681	7,164	33,071	2,607
August ..	7,203	30,501	2,501	7,243	32,747	2,547
September ..	7,170	30,341	2,461	7,346	33,174	2,643
October ..	7,312	30,206	2,598	7,530	32,021	2,646
November ..	7,565	30,113	2,746	7,726	32,945	2,719
December ..	7,903	27,614	2,839	7,605	32,846	2,617



## TABLES.

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1927.

**TABLE A.—MANCHESTER, 1927.**  
**CAUSES OF DEATH AT DIFFERENT LIFE PERIODS IN THE 52 WEEKS OF THE PERSONS.—(MALES AND FEMALES.)**

CAUSES OF DEATH	AGES AT DEATH												
	All Ages	UNDER 5 YEARS		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 & over
		0 to 1	1 to 5										
All Causes .....	10527	1122	721	188	105	228	248	501	752	1353	1761	2129	12
A.—GENERAL DISEASES.....	4087	696	360	95	60	146	158	271	353	576	643	516	1
B.—LOCAL DISEASES .....	5702	376	332	58	39	70	72	196	355	721	1055	1481	1
C.—OTHER SPECIFIED DIS... .	...	...	...	...	...	...	...	...	...	...	...	...	...
D.—ILL-DEFINED DISEASES... .	408	41	2	...	...	...	...	...	...	...	2	18	103
E.—VIOLENT DEATHS .....	330	9	27	35	6	12	18	34	44	54	45	29	1
A.—General Diseases.													
{ Vaccinated .....													
Smallpox..													
{ Not Vaccinated ..													
{ No Statement.....													
Cowpox .....													
Chickenpox .....		3	2	...	1	...	...	...	2	...	...	...	
Measles .....	164	45	111	6	...	...	...	...	...	...	...	...	
Epidemic Rose Rash .....													
Scarlet Fever..		20	3	10	6	1	...	...	...	...	...	...	
Typhus .....													
Plague .....													
Relapsing Fever .....													
Influenza .....	455	12	24	3	3	14	6	33	58	81	83	86	
Whooping Cough .....	124	48	74	2	...	...	...	...	...	...	...	...	
Mumps .....		2	1	...	...	...	...	...	...	...	...	1	
Diphtheria....		91	12	37	37	2	2	...	...	...	...	1	...
Poliomyelitis .....		4	...	2	...	...	...	1	...	1	...	...	
Cerebro-spinal Fever .....		6	1	2	2	...	...	1	...	...	...	...	
Simple Cont : Fever .....								1	...	...	...	...	
Enteric Fever .....		3	1	...	...	...	...	...	...	...	...	1	...
Asiatic Cholera .....												...	
Epidemic Diarrhoea .....		35	25	7	...	...	...	...	...	...	...	...	
<i>Diar. huma</i> .....		116	105	11	...	...	...	...	...	...	...	...	
Dysentery .....		2	...	...	1	...	...	...	...	...	1	...	
Malarial Fever.....		1	...	...	...	...	...	...	...	1	...	...	
Trench Fever .....													
Actinomycosis .....													
Hydrophobia .....													
Glanders.....													
Anthrax .....													
Tetanus .....													
Syphilis .....	27	8	1	...	...	...	...	1	2	6	6	3	...
Gonorrhœa, Strict : Urethra...	16	1	...	...	...	...	...	...	...	2	6	2	5
Puerperal. {													
Septicæmia .....	15	...	...	...	...	...	...	1	1	8	5	...	...
Pyæmia .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Phlegmasia Dol : .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever.....	6	...	...	...	...	...	...	2	3	1	...	...	...
Infective Endocarditis .....	18	...	...	1	1	1	1	3	3	5	2	...	2
Epidemic Pneumonia }								...	...	...	...	...	
Pneumonic Fever }								...	...	...	...	...	
Erysipelas .....	34	4	...	...	...	...	...	...	2	3	7	8	4
Septicæmia (not puerp :)	9	1	1	2	...	...	...	1	1	1	1	2	1
Pyæmia (not puerp :)	4	...	...	...	1	...	...	...	...	2	...	...	1
Phlegmon .....	7	...	...	...	...	...	1	1	2	...	3	...	...
Phagedæna .....											...	...	...
Other Septic Diseases.....	1	...	1	...	...	...	...	...	...	...	...	...	...
Tubercular Phthisis .....	827	3	15	9	12	78	104	148	149	190	88	27	
<i>Phthisis</i> .....	54	...	...	...	2	5	6	9	10	8	13	1	
Tubercular Meningitis.....	83	5	37	17	9	7	3	3	3	1	1	1	

TABLE A, 1927—continued.

TABLE A, 1927—continued.

CAUSES OF DEATH	All Ages	AGES AT DEATH											
		UNDER 5 YEARS		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85
		0 to 1	1 to 5										
<b>3. DISEASES OF HEART.</b>													
Valvular Dis : Endocarditis . . .	489	...	...	4	8	8	8	26	63	64	128	137	3
Pericarditis . . . . .	9	...	...	2	...	...	1	1	1	3	...	1	..
Hypertrophy of Heart . . . . .	2	...	...	...	...	...	...	...	1	1	...	...	..
Angina Pectoris . . . . .	42	...	...	...	...	...	...	...	1	7	14	16	..
Dilatation of Heart . . . . .	52	...	...	...	1	1	..	1	4	12	14	14	..
Fatty Degen : of Heart . . . . .	35	...	...	...	...	...	...	2	2	5	14	10	..
Syncope, Heart Disease . . . . .	523	...	...	1	1	1	3	7	14	72	115	194	10
<b>4. DIS : OF BLOOD VESSELS.</b>													
Cerebral Haemorrhage . . . . .	356	8	...	...	...	1	...	1	11	39	85	17	6
Apoplexy, Hemiplegia . . . . .	66	...	...	...	...	...	...	...	...	6	15	24	1
Aneurism . . . . .	12	...	...	...	...	...	...	...	1	2	4	3	2
Senile Gangrene . . . . .	16	...	...	...	...	...	...	...	...	...	...	11	..
Embolism, Thrombosis . . . . .	76	...	...	...	...	...	1	4	5	14	12	22	1
Phlebitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	..
Venous Veins . . . . .	1	...	...	...	...	...	...	...	...	...	1	...	..
Blood Vessels (Other Diseases)	576	1	...	...	...	...	...	2	7	26	93	232	18
<b>5. DIS : OF RESPIRATORY SYS:</b>													
Laryngitis . . . . .	2	...	2	...	...	...	...	...	...	...	...	...	..
Memb: Laryng: (Not Diphth:)	...	...	...	...	...	...	...	...	...	...	...	...	..
Croup . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	..
Larynx (Other Dis: ) . . . . .	1	...	...	...	...	...	...	...	...	...	...	1	..
Bronchitis . . . . .	1,194	83	41	1	...	6	5	9	43	131	211	377	24
Pneumonia { Lobar-Croupous,	411	17	41	7	6	17	10	30	55	79	63	62	1
{ Broncho-Lobular	525	160	188	9	...	6	3	11	16	34	49	31	1
"Pneumonia" . . . . .	16	2	3	1	...	...	1	3	2	1	1	..	..
Emphysema, Asthma . . . . .	28	1	...	...	...	...	...	3	6	5	8	3	..
Pleurisy . . . . .	36	1	4	2	...	1	1	4	3	8	5	5	..
Fibroid Disease of Lung . . . . .	2	...	...	...	...	...	...	...	...	2	...	..	..
Respiratory Dis: (Other) . . . . .	26	1	1	...	...	...	...	...	2	3	3	3	7
<b>6. DIS: OF DIGESTIVE SYS:</b>													
Tonsillitis, Quinsy . . . . .	6	1	2	...	...	...	...	1	1	1	...	...	..
Mouth, Pharynx . . . . .	1	...	...	1	...	...	...	...	...	...	...	...	..
Gastric Ulcer . . . . .	68	1	...	...	...	1	...	8	13	23	13	8	..
Gastric Catarrh . . . . .	1	...	...	...	...	...	...	...	...	...	...	1	..
Stomach (Other Dis: ) . . . . .	31	7	2	...	...	...	1	2	2	3	1	4	..
Enteritis . . . . .	9	...	3	...	...	...	...	...	...	2	1	1	..
Gastro-Enteritis . . . . .	2	...	1	...	...	...	...	...	...	...	...	1	..
Appendicitis, Perityph :	45	...	2	6	1	5	1	4	6	11	6	3	..
Hernia . . . . .	29	...	...	...	...	...	...	2	3	5	7	8	..
Intestinal Obstruct . . . . .	28	7	2	...	...	...	2	...	2	4	2	4	..
Other Diseases of Intestines .	12	1	1	...	...	...	...	2	1	...	5	1	..
Peritonitis . . . . .	17	1	...	3	1	...	1	2	2	2	2	3	2
Cirrhosis of Liver . . . . .	27	...	...	...	...	...	...	...	...	7	13	6	..
Liver . . . . .	21	...	...	...	...	...	...	1	1	2	11	5	..
Biliary Calculi . . . . .	18	...	...	...	...	...	...	...	1	3	5	6	..
Digestive System(Other Dis: ) .	8	...	...	1	...	...	1	...	1	1	1	3	..
<b>7. DIS : OF LYMPHATIC AND DUCTLESS GLANDS.</b>													
Spleen, Disease of . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	..
Lymphat: Syst: (Other Dis: ) . . .	24	5	2	...	...	1	2	2	3	7	1	1	..
Thyroid Body (Other Dis: ) . . .	6	...	...	...	...	...	...	...	...	...	...	2	..
Addison's Dis: (Dis: of) . . . . .	2	...	...	...	...	...	...	1	...	1	...	...	..
<b>8. DISEASES OF URINARY SYSTEM.</b>													
Nephritis Ac: Uremia . . . . .	37	2	1	...	3	2	2	5	5	6	4	4	..
Ch : Bright's Dis : Albumin : . . .	238	...	...	1	3	3	5	11	20	44	65	65	2
Calculus . . . . .	2	...	...	...	...	...	...	...	...	1	...	1	..
Bladder and Prostate Dis: . . .	70	...	...	...	...	...	...	1	1	...	1	13	24
Urinary Syst : (Other Dis ) . . .	11	2	...	...	...	...	...	...	...	2	3	3	..

TABLE A, 1927—concluded.

TABLE B.—MANCHESTER, 1927.  
CAUSES OF DEATHS AT DIFFERENT LIFE PERIODS—MALES.

TABLE C.—MANCHESTER, 1927.

CAUSES OF DEATHS AT DIFFERENT LIFE PERIODS—FEMALES.

ASSESSES	CAUSES OF DEATH	All Ages Total	AGES AT DEATH—IN YEARS												
			UNDER 5 YEARS		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
			o to 1 to 5	1 to 5	10 to 15	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards		
	All Causes .....	5033	453	320	82	61	117	126	262	345	558	779	1047	732	151
	Smallpox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles .....	69	19	45	3	...	...	...	2	...	...	...	...	...	...
	Scarlet Fever .....	8	1	3	4	...	...	...	...	...	...	...	...	...	...
	Typhus Fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Whooping Cough .....	63	23	38	2	...	...	...	...	...	...	...	...	...	...
	Diphtheria .....	36	3	16	15	1	...	...	...	...	...	1	...	...	...
	Ill-defined Fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Enteric Fever .....	1	1	...	...	...	...	...	...	...	...	...	...	...	...
	Influenza .....	216	4	13	1	...	7	2	10	19	36	37	47	33	7
	Epidemic Diarrhoea .....	11	7	4	...	...	...	...	...	...	...	...	...	...	...
	Diarrhoea, Dysentery, Simple Cholera .....	47	40	6	1	...	...	...	...	...	...	...	...	...	...
	Venereal Affections .....	10	3	...	...	...	1	...	1	3	2	...	...	...	...
	Erysipelas .....	16	2	...	...	...	...	...	2	5	4	...	3	...	...
	Pyæmia, Septicæmia (others) .....	7	...	...	2	1	...	...	1	...	...	3	...	...	...
	Puerperal Fever .....	21	...	...	...	...	1	3	11	6	...	...	...	...	...
	Other Zymotics .....	19	2	1	1	1	...	2	5	5	1	...	1	...	...
	Tubercular Periton : Tabes Mes.	8	...	1	...	1	2	1	...	1	1	1	...	...	...
	Tubercular Meningitis .....	39	4	14	10	6	3	...	1	...	...	1	...	...	...
	Phthisis .....	373	2	9	5	13	55	63	92	49	54	24	7	...	...
	Tuberculous Diseases (other) .....	27	...	3	1	2	2	5	5	2	4	1	2	...	...
	Parasitic Diseases .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Alcoholism .....	4	...	...	...	...	...	...	...	...	1	3	...	...	...
	Rheumatic Fever .....	41	...	...	...	10	8	5	4	4	4	2	4	...	...
	Cancer .....	536	...	...	...	1	2	14	53	103	151	143	60	9	...
	Premature Birth .....	96	96	...	...	...	...	...	...	...	...	...	...	...	...
	Congenital defects .....	36	34	1	...	...	...	1	...	...	...	...	...	...	...
	Atelectasis .....	9	9	...	...	...	...	...	...	...	...	...	...	...	...
	Epilepsy .....	19	...	1	1	3	2	2	2	3	3	1	...	1	...
	Convulsions .....	26	21	5	...	...	...	...	...	...	...	...	...	...	...
	Nervous System (other) .....	118	6	9	7	2	6	5	6	14	22	19	16	6	...
	Cerebral Haemorrhage, Apoplexy and Hemiplegia .....	243	4	...	...	...	1	...	1	6	24	59	89	49	10
	Heart and Blood Vessel Diseases	992	1	...	4	7	6	8	23	60	114	181	343	213	32
	Pleurisy .....	17	...	2	...	...	1	1	1	3	2	3	2	2	...
	Bronchitis .....	581	38	21	1	...	2	3	3	17	39	100	173	152	32
	Pneumonia { Lobar-Croupous Broncho-Lobular	148	7	17	2	3	2	6	11	13	20	26	30	10	1
	"Pneumonia" .....	238	69	89	4	...	4	6	8	26	15	12	1	...	...
	Respiratory Diseases (other) .....	25	1	1	...	...	...	1	2	4	6	2	8	...	...
	Cirrhosis .....	7	...	...	...	...	...	...	...	1	5	1	...	...	...
	Digestive System (other) .....	130	6	4	3	1	...	3	9	13	21	29	22	11	8
	Urinary System (other) .....	150	...	...	1	1	5	3	11	20	23	26	44	15	1
	Generative Organs and Childbirth	59	...	...	...	...	1	3	27	17	5	3	...	3	...
	Other specified Diseases .....	242	32	9	3	8	6	6	7	19	41	42	40	28	1
	Marsasmus and Atrophy .....	14	13	1	...	...	...	...	...	...	...	...	...	...	...
	Old Age .....	220	...	...	...	...	...	...	...	...	4	54	17	45	...
	Other Ill-defined Causes .....	6	1	1	...	...	...	...	...	...	2	...	...	2	...
	Violence .....	68	3	4	11	1	1	2	3	5	7	13	7	9	2
	Homicide .....	1	...	...	...	...	...	...	1	...	...	...	...	...	...
	Suicide .....	32	...	...	...	...	1	...	6	4	12	7	2	...	...

TABLE D.  
MANCHESTER, 1927.—CAUSES OF DEATH IN INFANCY AND  
CHILDHOOD.

CAUSES OF DEATH	UNDER ONE YEAR			Total under One Year	ONE AND UNDER FIVE YEARS			
	Under 3 months	3-6 months	6-12 months		1-	2-	3-	4-
All Causes .....	636	181	305	1,122	394	170	97	60
Chicken Pox.....	...	...	2	2	...	...	...	...
Measles .....	1	5	39	45	65	23	14	9
Scarlatina .....	...	...	3	3	3	2	3	2
Whooping Cough .....	9	18	21	48	48	5	20	1
Diphtheria.....	...	3	9	12	13	7	9	8
Erysipelas .....	2	...	2	4	...	...	...	...
Diarrhoeal Diseases .....	64	43	26	133	15	3	...	...
Gastritis .....	5	2	...	7	1	1	...	...
Syphilis .....	8	...	..	8	1	...	...	...
Tabes Mesenterica and Tuberc. Peritonitis	1	...	1	2	1	2	...	...
Tubercular Meningitis .....	...	1	4	5	14	11	7	5
Tuberculosis (other).....	...	2	3	5	10	8	3	1
Rickets .....	...	...	1	1	6	1	...	...
Premature Birth .....	249	1	...	250	...	...	...	...
Injury at Birth .....	33	1	...	34	...	...	...	...
Atelectasis .....	20	1	...	21	...	...	...	...
Congenital Malformations	67	8	6	81	1	1	...	1
Convulsions .....	35	9	8	52	3	2	1	1
Meningitis .....	2	1	3	6	5	4	...	2
Nervous Diseases (other) ...	1	...	2	3	7	3	...	...
Bronchitis .....	26	23	34	83	27	11	...	3
Pneumonia .....	23	45	111	179	139	61	21	11
Other Respiratory Diseases	3	...	...	3	2	...	3	2
Atrophy, Marasmus .....	31	7	1	39	1	...	...	...
Found Dead in Bed (over- laid)	4	...	...	4	...	...	...	...
Suffocation .....	1	...	1	2	1	...	...	...
Violence (other forms) .....	1	1	1	3	10	6	6	4
Ill-defined Causes.....	1	...	...	1	...	..	1	...
Unclassified .....	49	10	27	86	21	19	9	10

## Annual Rates per 1,000 persons living

Year	Estimated Population (Mean)	Persons Married	Births	Deaths (All causes)	Smallpox	Measles	Diphtheria	Whooping Cough	Typhus Fever	Epidemic Fever	Simplex Fever	Continued Fever	Diphtherial Diseases	Injuries Cases	Deaths in Public Institutions	Infantile Mortality	Year
																	1871-1875
1871-1875	477,344	24·6	38·9	28·3	0·26	0·64	1·08	0·08	0·78	0·14	0·43	0·21	1·95	0·94	7·2	13·4	198 .. 1871-1875
1876-1880	509,802	18·6	38·7	26·2	0·24	0·53	1·07	0·13	0·84	0·08	0·29	0·11	1·26	0·89	7·5	14·3	172 .. 1876-1880
1881-1885	542,746	17·9	35·1	23·6	0·04	0·71	0·48	0·10	0·68	0·05	0·20	0·03	0·99	0·72	7·0	15·9	175 .. 1881-1885
1886-1890	575,630	16·6	33·4	24·6	0·02	0·83	0·50	0·32	0·54	0·02	0·30	0·01	1·08	0·78	6·9	17·7	183 .. 1886-1890
1891-1895	517,801	16·9	33·2	23·6	0·03	0·62	0·26	0·27	0·64	0·00	0·24	0·01	1·19	0·77	7·1	19·2	186 .. 1891-1895
1896-1900	539,599	18·2	32·5	22·7	..	0·89	0·20	0·13	0·53	0·00	0·18	0·01	1·69	0·73	7·1	20·2	192 .. 1896-1900
1901-1905	554,355	17·4	30·9	20·1	0·01	0·55	0·19	0·22	0·41	0·00	0·13	0·00	1·15	0·72	7·1	24·4	173 .. 1901-1905
1906-1910	660,049	17·0	28·1	17·7	..	0·54	0·16	0·17	0·37	0·00	0·10	0·00	0·76	0·68	7·4	27·3	147 .. 1906-1910
1911-1915	731,677	17·6	24·8	16·4	..	0·50	0·12	0·14	0·25	..	0·05	..	0·84	0·67	7·9	30·8	133 .. 1911-1915
1916-1920	770,330	16·7	19·2	14·1	..	0·24	0·04	0·08	0·21	..	0·02	0·00	0·30	0·49	6·4	32·3	105 .. 1916-1920
1921-1925	751,288	15·5	20·6	13·9	..	0·25	0·0	0·10	0·20	..	10·0	..	0·33	0·44	5·7	37·8	95 .. 1921-1925
1926..	..	761,320	15·3	18·3	13·2	..	0·20	0·03	0·14	0·08	..	0·00	0·31	0·41	5·8	39·2	87 .. 1926
1927..	..	764,420	16·7	17·1	13·8	..	0·21	0·03	0·0	0·16	0·12	0·00	0·20	0·43	5·0	42·0	86 .. 1927

The populations and rates prior to 1891 are those for the Unions of Manchester, Chorlton, and Prestwich, which have been taken to approximately represent "Manchester." The City was extended to include Moss Side and Withington in November, 1904, and to include Gorton and Levenshulme in November, 1909.

TABLE F.

MANCHESTER—ANNUAL RATES OF MORTALITY FROM CERTAIN CAUSES OF DEATH

YEAR	ANNUAL RATES PER 1,000 PERSONS LIVING											PE
	Cancer	Tuberc. Peritonitis Tubes Mes.	Phthisis	Other Tuberc. Diseases	Diseases of Nervous System	Diseases of Heart and Blood Vessels	Diseases of Respiratory System	Diseases of Digestive System	Diseases of Urinary System	Diseases of Generative System	Puerperal	
1881-1885 ..	0.50	0.35	2.42	0.57	3.28	1.37	5.41	1.23	0.48	0.08	3.0	
1886-1890 ..	0.64	0.36	2.24	0.59	3.09	1.73	5.76	1.23	0.61	0.08	3.3	
1891-1895 ..	0.62	0.22	2.09	0.75	1.74	2.53	5.56	1.07	0.52	0.07	2.0	
1896-1900 ..	0.73	0.19	2.04	0.63	1.32	2.54	5.03	1.04	0.49	0.09	1.0	
1901-1905 ..	0.80	0.16	1.94	0.55	1.17	2.56	4.29	0.95	0.49	0.08	1.0	
1906-1910 ..	0.88	0.14	1.65	0.45	0.95	2.56	3.75	0.84	0.54	0.07	1.0	
1911-1915 ..	1.01	0.12	1.59	0.38	0.79	2.34	3.45	0.68	0.56	0.09	1.0	
1916-1920 ..	1.08	0.09	1.39	0.28	0.54	2.27	2.98	0.51	0.47	0.06	1.0	
1921-1925 ..	1.34	0.06	1.26	0.24	0.51	2.58	3.03	0.47	0.46	0.07	1.0	
1926 .. ..	1.44	0.03	1.19	0.19	0.49	2.74	2.61	0.46	0.47	0.08	1.0	
1927 .. ..	1.42	0.03	1.15	0.20	0.48	2.95	2.93	0.42	0.47	0.08	1.0	

See footnotes to Table E.

TABLE G, 1927.—POPULATION, AREA, DENSITY. TOTAL BIRTHS AND DEATHS, WITH BIRTH AND DEATH RATES.

[INSTITUTION POPULATIONS, BIRTHS AND DEATHS, DISTRIBUTED.]

WARDS	Estimated Population	Area in Acres	Persons to an Acre	BIRTHS		DEATHS		Natural Rate of Increase
				Total	Rate per 1,000	Total	Rate per 1,000	
City .....	764,420	21,690	35	13,082	17·11	10,527	13·77	3·34
All Saints .....	26,615	300	89	518	19·46	373	14·01	5·45
Ardwick .....	30,791	426	72	568	18·45	447	14·52	3·93
Beswick .....	32,648	254	129	560	17·15	444	13·60	3·55
Blackley .....	19,867	1,158	17	309	15·55	223	11·23	4·32
Bradford .....	27,966	792	35	582	20·81	385	13·77	7·04
Cheetham .....	26,819	555	48	350	13·05	269	10·03	3·02
Chorlton-cum-Hardy .....	35,240	1,666	21	528	14·98	399	11·32	3·66
Collegiate Church .....	19,239	446	43	348	18·09	238	12·37	5·72
Collyhurst .....	26,450	231	114	570	21·55	447	16·90	4·65
Darlington .....	12,186	2,203	6	172	14·11	177	14·39	— 0·28
Didsbury .....	13,777	2,357	6	209	15·17	163	11·83	3·34
Exchange .....	535	61	9	...	...	5	9·35	— 9·35
Gorton North .....	26,503	604	44	374	14·11	298	11·24	2·97
Gorton South ...	25,203	628	40	448	17·77	300	11·90	5·87
Harpurhey .....	25,917	342	76	382	14·74	337	13·00	1·74
Levenshulme .....	22,432	606	37	241	10·74	233	10·39	0·35
Longsight .....	21,717	593	37	266	12·25	237	10·91	1·34
Medlock Street .....	33,946	212	160	679	20·00	495	14·58	5·42
Miles Platting .....	27,149	313	87	538	19·82	437	16·10	3·72
Moston .....	21,315	1,231	17	268	12·57	253	11·87	0·70
Loss Side East .....	23,487	241	97	295	12·56	297	12·65	— 0·09
Loss Side West .....	23,176	267	87	261	11·26	304	13·12	— 1·86
New Cross .....	29,634	303	98	707	23·86	527	17·78	6·08
Newton Heath .....	20,888	1,007	21	326	15·61	299	14·31	1·30
Openshaw .....	26,449	482	55	481	18·19	367	13·88	4·31
Oxford....	1,532	167	9	13	8·49	35	22·85	— 14·36
Rusholme .....	21,006	806	26	237	11·28	221	10·52	0·76
S. Ann's .....	210	55	4	...	...	2	9·52	— 9·52
S. Clement's .....	6,559	181	36	172	26·22	120	18·30	7·92
S. George's .....	31,676	266	119	679	21·44	501	15·82	5·62
S. John's.....	5,765	199	29	124	21·51	117	20·29	1·22
S. Luke's .....	30,120	316	95	529	17·56	545	18·09	— 0·53
S. Mark's .....	30,057	340	88	537	17·87	403	13·41	4·46
S. Michael's .....	20,167	243	83	510	25·29	423	20·97	4·32
Withington .....	17,379	1,841	9	301	17·30	206	11·84	5·46

TABLE H, 1927.

BIRTHS REGISTERED IN THE CITY OF MANCHESTER, IN WARDS, AND DISTINGUISHING LEGITIMATE AND ILLEGITIMATE BIRTHS; ALSO THE PROPORTION OF MORTALITY AMONG INFANTS OF BOTH CLASSES UNDER ONE YEAR OF AGE.

WARDS	BIRTHS		Percentage of Illegitimate Births to Total Births	DEATHS UNDER 1 YEAR		PROPORTION OF DEATHS UNDER 1 YEAR PER 1,000 BIRTHS	
	Total	Illegitimate		Total	Of Illegitimate Children	Total	Legitimate
City .....	13,082	627	4·8	1,122	79	86	84
All Saints .....	518	55	10·6	39	4	75	76
Ardwick .....	568	31	5·5	65	3	114	115
Beswick .....	560	22	3·9	43	5	77	71
Blackley .....	329	9	2·9	10	1	32	30
Bradford .....	582	16	2·7	55	2	94	94
Cheetham .....	350	14	4·0	25	1	71	71
Chorlton-cum-Hardy .....	528	12	2·3	26	1	49	48
Collegiate Church .....	348	15	4·3	28	3	80	75
Collyhurst .....	570	32	5·6	75	5	131	130
Crumpsall .....	172	7	4·1	16	...	93	97
Didsbury .....	209	7	3·4	12	2	57	49
Exchange .....	...	...	...	...	...	...	...
Gorton North .....	374	15	4·0	31	2	83	81
Gorton South .....	418	14	3·1	25	...	56	57
Harpurhey .....	382	19	5·0	46	3	120	118
Levenshulme .....	241	11	4·6	10	1	41	39
Longsight .....	266	7	2·6	18	...	68	69
Medlock Street .....	679	35	5·2	53	2	78	79
Miles Platting .....	538	17	3·2	58	1	108	109
Moston .....	268	6	2·2	21	1	78	76
Moss Side East .....	295	28	9·5	23	3	78	75
Moss Side West .....	261	11	4·2	23	2	38	34
New Cross .....	707	26	3·7	62	4	88	85
Newton Heath .....	326	10	3·1	10	1	58	57
Openshaw .....	481	17	3·5	56	3	116	114
Oxford .....	13	1	7·7	...	...	...	...
Rusholme .....	237	14	5·9	14	1	59	58
St. Ann's .....	...	...	...	...	...	...	...
St. Clement's .....	172	6	3·5	17	...	99	102
St. George's .....	679	40	5·9	70	6	103	100
St. John's .....	124	8	6·5	6	...	48	52
St. Luke's .....	529	59	11·2	65	15	123	106
St. Mark's .....	537	20	3·7	52	3	97	95
St. Michael's .....	510	32	6·3	43	3	84	84
Withington .....	301	11	3·7	16	1	53	52

TABLE I, 1927.

MANCHESTER.—CERTIFICATION OF THE CAUSES OF DEATH IN THE CITY  
AND IN THE VARIOUS WARDS.

WARDS	Total Deaths	Certified by		Not Certified	Proportion per cent. of Deaths			
		Registered Medical Practitioners	Coroner		Regist'd Medical Practitioners	Coroner	Not Certified	
City .....	10,527	9,905	528	94	94.1	5.0	0.9	
Saints .....	373	352	20	1	94.3	5.4	0.3	
wick .....	447	424	21	2	94.9	4.7	0.4	
wick .....	444	423	19	2	95.2	4.3	0.5	
ckley .....	223	208	11	4	93.3	4.9	1.8	
dford .....	385	361	19	5	93.8	4.9	1.3	
etham .....	269	253	12	4	94.0	4.5	1.5	
rlton-cum-Hardy .....	399	360	34	5	90.2	8.5	1.3	
legate Church .....	238	220	16	2	92.5	6.7	0.8	
yhurst .....	447	429	16	2	95.9	3.6	0.5	
mpsall .....	177	166	8	3	93.8	4.5	1.7	
sbury.....	163	155	6	2	95.1	3.7	1.2	
hange .....	5	4	1	...	80.0	20.0	...	
ton North.....	298	282	14	2	94.6	4.7	0.7	
ton South .....	300	285	15	...	95.0	5.0	...	
purhey .....	337	315	22	...	93.5	6.5	...	
enshulme .....	233	223	6	4	95.7	2.6	1.7	
g-eight .....	237	224	7	6	94.5	3.0	2.5	
llock Street .....	495	470	23	2	95.0	4.6	0.4	
es Platting.....	437	409	27	1	93.6	6.2	0.2	
ston .....	253	239	13	1	94.5	5.1	0.4	
s Side East .....	297	279	16	2	93.9	5.4	0.7	
s Side West .....	304	289	13	2	95.0	4.3	0.7	
Cross .....	527	505	19	3	95.8	3.6	0.6	
ton Heath .....	299	282	16	1	94.3	5.4	0.3	
nshaw .....	367	346	15	6	94.3	4.1	1.6	
ord .....	35	35	...	...	100.0	...	...	
holme .....	221	207	11	3	93.6	5.0	1.4	
Ann's.....	2	1	...	1	50.0	...	50.0	
Clement's .....	120	115	3	2	95.8	2.5	1.7	
George's .....	501	460	34	7	91.8	6.8	1.4	
ohn's .....	117	110	6	1	94.0	5.1	0.9	
uke's .....	545	507	33	5	93.0	6.1	0.9	
Mark's .....	403	382	15	6	94.8	3.7	1.5	
ichael's .....	423	391	28	4	92.4	6.6	1.0	
ington .....	206	194	9	3	94.1	4.4	1.5	

## NOTIFIABLE INFECTIOUS DISEASES OTHER THAN WHOOPING COUGH AND TUBERCULOSIS.

The diseases included in the Infectious Disease (Notification) Acts, 1889 and 1901 regulations under the Public Health Acts, are as follows:—Smallpox, Scarlet Fever, Diphtheria, Typhus Fever, Enteric or Typhoid Fever, Relapsing Fever, Continued Puerperal Fever, Puerperal Pyrexia, Erysipelas, and Asiatic Cholera, to which have added Ophthalmia Neonatorum, Cerebro-Spinal Fever, Poliomyelitis, Polio-Encephalitis and Encephalitis-Lethargica, Malaria, Dysentery, Trench Fever, Acute Primary Pneumonia and Acute Influenzal Pneumonia. The following cases were notified in 1927, and the numbers are compared with the average of the previous ten years:—

	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Mean
Smallpox . . . . .	..	..	14	4	..	4	..	..	..	2	2
Chickenpox . . . . .	..	..	1,153	1,936	2,443	2,860	3,354	3,574	4,105	5,783	3,151
Scarlet Fever . . . . .	829	779	1,758	3,829	5,400	3,618	1,814	1,784	2,869	2,259	2,494
Diphtheria . . . . .	581	518	471	914	1,002	805	536	570	1,040	1,145	758
Typhus Fever . . . . .	1	..	..	..	..	..	..	..	..	..	..
Enteric Fever . . . . .	86	68	90	54	74	36	50	103	65	30	66
Relapsing Fever . . . . .	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever . . . . .	54	66	159	146	138	130	130	115	179	174	129
Puerperal Pyrexia . . . . .	..	..	..	..	..	..	..	..	..	32	32
Erysipelas . . . . .	228	243	392	382	385	379	294	284	412	378	338
Ophthalmia Neonatorum . . . . .	315	307	344	392	227	263	227	336	266	218	299
Cerebro-Spinal Fever . . . . .	7	5	11	11	3	8	3	11	9	12	8
Poliomyelitis . . . . .	14	10	8	7	7	7	4	7	12	12	9
Polio-Encephalitis . . . . .	..	..	4	1	..	..	..	1	4	2	1
Encephalitis-Lethargica . . . . .	..	..	10	19	31	9	36	244	78	91	65
Malaria . . . . .	..	..	312	172	38	19	16	3	4	1	71
Dysentery . . . . .	..	..	6	9	8	3	2	2	1	2	4
Trench Fever . . . . .	..	..	1	1	1	1	..	..	..	..	..
Primary Pneumonia . . . . .	..	..	410	620	1,578	2,268	2,067	2,203	2,200	1,876	1,653
Influenzal Pneumonia . . . . .	..	..	816	205	218	487	426	447	351	313	408
Measles . . . . .	10,613	8,448	8,420	10,635	1,135	19,614	3,481	18,349	7,941	10,953	9,959
Rubeola . . . . .	621	675	186	179	453	177	94	224	2,107	1,128	584
Pemphigus Neonatorum . . . . .	..	..	..	..	..	..	..	..	83	128	106
	13,349	11,119	14,565	19,516	13,141	30,689	12,534	28,257	21,726	24,539	20,126

In 1900 Erysipelas was made notifiable, in 1910 Ophthalmia Neonatorum, in 1912 Cerebro-Spinal Fever, Poliomyelitis, and in 1919 the diseases which first appear under that year. Measles were made notifiable in 1925, and Rubeola.

From 1919 (September) Chickenpox has been notifiable, and in 1925 (September) Pemphigus Neonatorum was made notifiable.

Puerperal Pyrexia was made notifiable on October 1st, 1926.

The deaths from the more common diseases are shown in the following figures :—

Years	Measles	Scarlet Fever	Diphtheria	Enteric Fever	Influenza	Whooping Cough	Diarrhoea	Phthisis
1926 Average	185	37	72	11	525	134	230	977
1927	164	20	91	3	455	124	151	881

### SMALLPOX.

36 cases of smallpox were notified during the year.

The first case occurred in May when a vagrant who was infected in a neighbouring town was discovered in Manchester to be suffering from the disease. Clayton Vale Hospital was opened for his reception and treatment for a period of 4 weeks.

No further infection arose from this case, so far as is known, and the City remained clear until the beginning of October.

Between October 1st and December 31st 35 cases were notified, of which 15 were distributed over 8 districts, and 20 occurred in one or other of the Poor Law Institutions.

The disease was introduced by two men who came from outside the City boundaries to reside in a Manchester common lodging house. They doubtless received their infection from a common source which remained undetermined. These men after wandering about and visiting various public houses for several days with the eruption upon them were eventually admitted to Withington Hospital, where the nature of their illness was recognised.

Of the 15 cases which occurred in the districts, 6 arose in 1 house, 3 in another, and 1 in each of 6 houses.

The infection was therefore fairly widespread, and it was clear that persons suffering from unrecognised smallpox were going freely about whilst in an infectious condition. Two such overlooked cases were traced and were known to be responsible for the infection of 8 persons. Searching of common lodging houses at night time by the medical staff of the Department also resulted in the discovery of cases which otherwise would have been overlooked.

The class of people responsible for the introduction and spread of the disease rendered the task of tracing and keeping under observation the contact difficult in the extreme and in many instances it was impossible to keep track of their movements. Consequently the disease has persisted through the early months of 1928, though at no period has the prevalence assumed epidemic proportions.

The measures taken to combat the outbreak have been the subject of report to the Public Health Committee from time to time and have involved the expenditure of much time and energy by the staff of the Public Health Department.

#### *Type of Disease.*

Generally speaking the disease conformed to the type now prevailing in the country. In a number the attack was of considerable severity. In some cases it was so mild that the whole eruption was represented by a few abortive lesions and the diagnosis would have been difficult had not the persons concerned been under close observation at the time of the onset of their illness.

#### *Vaccination State.*

The vaccination state of the 36 cases which occurred during the year is shown in the following table. It will be noted that no person who had been vaccinated within a period of 10 years was attacked by the disease.

TABLE SHOWING VACCINATION STATE OF 35 SMALLPOX  
PATIENTS, 1927.

Age Group	Number of Patients	Number Unvaccinated	Number Vaccinated in Infancy	Number Revaccinated
0—10 years .. . . .	2	2	..	..
10—20 years .. . . .	7	7	..	..
20—30 years .. . . .	2	..	2	..
30 years and over .. . .	25	..	25	..

## CHICKENPOX.

Chickenpox was made a notifiable disease on September 15th, 1919, for six months, and its notifiability has been renewed from time to time since that date.

CHICKENPOX.—NUMBER OF ATTACKS AT DIFFERENT AGES DURING 1927.

## SCARLET FEVER.

The following figures show the course of the disease in quarters:—

TABLE I.—SCARLET FEVER.—ATTACKS IN QUARTERS ACCORDING TO DATE OF RASH.

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
1922 ..	1104	1022	654	838	3618
1923 ..	528	516	385	385	1814
1924 ..	253	305	500	726	1784
1925 ..	662	642	802	763	2869
1926 ..	487	450	639	683	2259
Mean ..	607	587	596	679	2469
1927 ..	362	397	441	623	1823

TABLE 2.—1927.—SCARLET FEVER ATTACKS IN WARDS, WITH ATTACK RATE, CASE FATALITY PER CENT., AND REMOVALS TO HOSPITAL PER CENT.

WARDS	ATTACKS	ATTACK RATE PER 1,000 LIVING	† CASE FATALITY PER CENT.	REMOVALS TO HOSPITAL PER CENT.
City . . . . .	1,823	2·4	1·2	72·5
All Saints . . . . .	48	1·8	2·1	87·5
Ardwick . . . . .	58	1·9	1·7	74·2
Beswick . . . . .	57	2·4	—	89·4
Blackley . . . . .	62	3·1	—	72·6
Bradford . . . . .	56	2·0	—	69·7
Cheetham . . . . .	39	1·5	5·1	69·2
Chorlton-cum-Hardy .	102	2·9	—	53·9
Collegiate Church .	28	1·5	—	85·7
Collyhurst . . . . .	85	3·2	—	84·8
Crumpsall . . . . .	22	1·8	—	63·6
Didsbury . . . . .	72	5·2	—	72·2
Exchange . . . . .	—	—	—	—
Gorton North . . . . .	40	1·5	5·0	80·0
Gorton South . . . . .	55	2·2	—	69·1
Harpurhey . . . . .	58	2·2	1·7	63·8
Levenshulme . . . . .	77	3·4	—	58·5
Longsight . . . . .	67	3·1	—	53·7
Medlock Street . . . . .	64	1·9	—	82·8
Miles Platting . . . . .	65	2·4	3·1	80·0
Moston . . . . .	48	2·3	—	54·2
Moss Side East . . . . .	40	1·7	—	77·7
Moss Side West . . . . .	42	1·8	—	66·6
New Cross . . . . .	42	1·4	2·4	85·7
Newton Heath . . . . .	65	3·1	—	78·4
Openshaw . . . . .	78	3·0	1·3	74·4
Oxford . . . . .	1	0·7	—	100·0
Rusholme . . . . .	66	3·1	3·0	43·9
St. Ann's . . . . .	—	—	—	—
St. Clement's . . . . .	29	4·4	—	100·0
St. George's . . . . .	74	2·3	—	86·5
St. John's . . . . .	2	0·3	—	50·0
St. Luke's . . . . .	48	2·4	—	66·7
St. Mark's . . . . .	45	1·5	—	95·6
St. Michael's . . . . .	74	3·7	4·1	91·9
Withington . . . . .	114	6·6	4·4	60·6

† Corrected; the fatal cases are those actually occurring amongst the cases notified.

TABLE 3.—SCARLET FEVER.—NUMBER OF ATTACKS AND OF DEATHS; ALSO THE CASE FATALITY PER CENT. AT DIFFERENT AGES FOR THE THIRTY-SIX YEARS, 1891—1926, AND FOR 1927.

Ages	1891-1926			1927		
	Attacks	Deaths	Case Fatality per cent.	Attacks	Deaths	Case Fatality per cent.
Under 1 year . . .	752	123	16·3	10	3	30·0
1 to 2 years. . . .	2228	308	13·8	27	2	7·4
2 to 3 „ . . . .	4977	492	9·9	99	4	4·0
3 to 4 „ . . . .	6984	533	7·6	172	4	2·3
4 to 5 „ . . . .	8174	459	5·6	169	1	0·6
5 to 6 „ . . . .	9026	292	3·2	240	3	1·3
6 to 7 „ . . . .	8356	198	2·4	231	2	0·9
7 to 8 „ . . . .	7316	136	1·9	166	—	—
8 to 9 „ . . . .	6176	95	1·5	110	—	—
9 to 10 „ . . . .	5172	79	1·5	78	—	—
10 to 15 „ . . . .	15563	174	1·1	310	2	0·7
15 to 20 „ . . . .	4898	71	1·4	101	—	—
20 to 25 „ . . . .	2347	42	1·8	47	—	—
25 to 35 „ . . . .	2192	48	2·2	42	—	—
35 to 45 „ . . . .	666	18	2·7	16	—	—
45 and over . . . .	177	7	4·0	5	—	—
All ages . . . . .	85004	3075	3·6	1823	21	1·2

Table 4 gives a comparison of the death-rates from scarlet fever in different areas, and shows that the death-rate is higher than that for the entire country.

TABLE 4.—SCARLET FEVER MORTALITY, 1927.—RATE PER 1,000 LIVING,  
COMPARED WITH MEAN OF FIVE YEARS.

	1922	1923	1924	1925	1926	Mean	1927
England and Wales .....	0.04	0.03	0.02	0.03	0.02	0.03	0.01
107 Great Towns .....	0.05	0.03	0.03	0.03	0.02	0.03	0.01
London .....	0.07	0.02	0.03	0.02	0.02	0.03	0.01
Manchester City .....	0.07	0.04	0.04	0.07	0.03	0.05	0.03
155 Smaller Towns .....	0.03	0.02	0.02	0.02	0.02	0.02	0.01

SCARLET FEVER, 1927.—ATTACKS IN WEEKS, ACCORDING TO DATE OF RASH.

FIRST QUARTER		SECOND QUARTER		THIRD QUARTER		FOURTH QUARTER	
Week of Year	1927	Week of Year	1927	Week of Year	1927	Week of Year	1927
I	26	14	26	27	25	40	50
2	29	15	24	28	24	41	61
3	40	16	21	29	44	42	65
4	32	17	32	30	22	43	75
5	36	18	37	31	22	44	46
6	27	19	37	32	20	45	44
7	22	20	28	33	25	46	43
8	21	21	38	34	30	47	34
9	16	22	30	35	40	48	45
10	28	23	26	36	31	49	51
11	32	24	27	37	48	50	45
12	23	25	37	38	60	51	32
13	30	26	34	39	50	52	32
Total ..	362	Total ..	397	Total ..	441	Total ..	623

City total, 1927—1,823.

#### SCARLET FEVER "RETURN" CASES, 1927.

Out of 1,298 discharges from Monsall Hospital, 52 gave rise to at least 52 "return" cases, a "return" case rate of 4.0. In addition, 16 others contracted the disease indirectly from a returned patient.

Table showing the interval between return home of hospital patients and onset of illness in "return" cases.

Days	0-6	7-13	14-20	21-27
No. of Cases .. . . . .	21	19	5	7

*Consultations.*—Twenty-three consultation visits were made during the year by Medical Officers of the Department at the request of medical practitioners in the City in connection with the diagnosis of cases of infectious disease in which the nature of the illness was in doubt.

## DIPHTHERIA.

The usual tables for this disease are given below.

The following table shows the number of cases notified each year for the last ten years:—

1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
518	471	914	1,002	806	536	570	1,040	1,145	1,208

TABLE I.

DIPHTHERIA, 1927.—ATTACKS IN WEEKS, ACCORDING TO DATE OF ONSET.

FIRST QUARTER		SECOND QUARTER		THIRD QUARTER		FOURTH QUARTER	
Week of Year	1927	Week of Year	1927	Week of Year	1927	Week of Year	1927
I	20	14	13	27	19	40	39
2	14	15	19	28	26	41	23
3	16	16	10	29	36	42	29
4	20	17	12	30	26	43	27
5	25	18	12	31	14	44	33
6	19	19	16	32	17	45	38
7	16	20	10	33	16	46	56
8	29	21	10	34	14	47	42
9	23	22	14	35	30	48	31
10	21	23	6	36	17	49	28
11	22	24	12	37	20	50	25
12	27	25	19	38	41	51	37
13	27	26	24	39	38	52	30
Total ..	279	Total ..	177	Total ..	314	Total ..	438

CITY TOTAL, 1927—1,208.

The following table shows that the number of attacks is highest in children up to 10 years.

TABLE II.

DIPHTHERIA.—NUMBER OF ATTACKS, OF DEATHS, AND CASE FATALITY AT DIFFERENT AGES FOR THE THIRTY-SIX YEARS, 1891-1926, AND FOR 1927.

Ages	1891-1926			1927		
	Attacks	Deaths	*Case Fatality %	Attacks	Deaths	*Case Fatality %
Under 1 year .. ..	449	258	57·4	16	6	37·5
1 to 2 years .. ..	1240	572	46·2	47	16	34·0
2 to 3 .. ..	1637	515	31·5	62	8	12·9
3 to 4 .. ..	2012	499	24·8	89	11	12·4
4 to 5 .. ..	2135	451	21·1	114	11	9·6
5 to 6 .. ..	2152	371	17·2	163	11	6·7
6 to 7 .. ..	1714	224	13·1	156	7	4·5
7 to 8 .. ..	1334	148	11·1	112	10	8·9
8 to 9 .. ..	1078	120	11·1	77	11	14·3
9 to 10 .. ..	814	75	9·2	62	5	8·1
10 to 15 .. ..	2382	119	5·0	163	2	1·2
15 to 20 .. ..	1008	40	4·0	72	1	1·4
20 to 25 .. ..	668	18	2·7	29	—	—
25 to 35 .. ..	846	23	2·7	23	—	—
35 to 45 .. ..	361	7	1·9	12	—	—
45 and over .. ..	174	14	8·0	11	1	9·1
All ages .. ..	20004	3454	17·3	1208	100	8·3

\* The percentages in this column are the actual proportions of fatal cases to the attacks at those ages.

The comparison of the case fatality of 1927 (8·3) with that for the previous 19 years is matter for satisfaction.

The case fatality at all ages since 1908 has been as follows:—

1908	1909	1910	1911	1912	1913	1914	1915	1916	1917
— 21·8	— 17·9	— 19·9	— 16·5	— 20·0	— 14·9	— 14·3	— 18·8	— 11·7	— 10·8
1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
— 10·8	— 9·1	— 7·3	— 8·7	— 9·8	— 9·5	— 9·3	— 8·8	— 8·6	— 8·3

From the following table we see that the apparent incidence of the disease was greatest in the wards of Bradford, St. Clement's, Openshaw, Withington, and Beswick. The percentage of removals is 84·7. The disease is one which yields good results to isolation and care in removing infection.

TABLE III.

DIPHTHERIA, 1927.—ATTACKS IN WARDS, WITH ATTACK RATE, CASE FATALITY PER CENT., AND REMOVALS TO HOSPITAL PER CENT.

Wards		Attacks	Deaths	Attack Rate per 1000 Living	† Case Fatality per cent.	Removals to Hospital per cent.
City	.. .. ..	1208	100	1·6	8·3	84·7
All Saints	.. .. ..	22	3	0·8	13·6	95·4
Ardwick	.. .. ..	42	2	1·4	4·8	92·8
Beswick	.. .. ..	76	8	2·3	1·5	96·0
Blackley	.. .. ..	41	13	2·1	31·7	92·7
Bradford	.. .. ..	84	3	3·0	3·6	84·5
Cheetham	.. .. ..	35	3	1·3	8·6	85·7
Chorlton-cum-Hardy	.. ..	70	6	2·0	8·6	67·1
Collegiate Church	.. ..	31	4	1·6	1·3	100·0
Collyhurst	.. .. ..	36	—	1·4	—	91·4
Crumpsall	.. .. ..	7	1	0·6	14·3	42·9
Didsbury	.. .. ..	16	4	1·2	25·0	87·5
Exchange	.. .. ..	—	—	—	—	—
Gorton North	.. ..	49	3	1·8	6·1	77·6
Gorton South	.. ..	50	5	2·0	10·0	88·0
Harpurhey	.. .. ..	30	1	1·2	3·3	83·3
Levenshulme	.. .. ..	33	1	1·5	3·0	78·8
Longsight	.. .. ..	44	4	2·0	9·1	72·7
Medlock Street	.. ..	37	3	1·1	8·1	81·1
Miles Platting	.. .. ..	42	3	1·5	7·1	88·1
Moston	.. .. ..	25	2	1·2	8·0	60·0
Moss Side East	.. ..	17	1	0·7	5·8	52·9
Moss Side West	.. ..	15	1	0·7	6·6	66·6
New Cross	.. .. ..	61	3	2·1	4·9	85·2
Newton Heath	.. .. ..	32	2	1·5	6·3	96·3
Openshaw	.. .. ..	78	6	2·9	7·7	92·3
Oxford	.. .. ..	1	—	0·7	—	100·0
Rusholme	.. .. ..	30	1	1·4	3·3	63·3
St. Ann's	.. .. ..	—	—	—	—	—
St. Clement's	.. .. ..	20	—	3·0	—	95·0
St. George's	.. .. ..	35	1	1·1	2·8	85·7
St. John's	.. .. ..	10	2	1·7	20·0	100·0
St. Luke's	.. .. ..	33	3	1·1	9·1	78·8
St. Mark's	.. .. ..	46	3	1·5	6·5	91·3
St. Michael's	.. .. ..	23	1	1·1	4·3	91·3
Withington	.. .. ..	41	7	2·4	17·1	82·9

† Corrected; the fatal cases are those actually occurring amongst the cases notified.

TABLE IV.

## DIPHTHERIA MORTALITY, 1927.—RATE PER 1,000 LIVING COMPARED WITH MEAN OF FIVE YEARS.

	1922	1923	1924	1925	1926	Mean	1927
England and Wales.....	0.11	0.07	0.06	0.07	0.07	0.08	0.07
107 Great Towns.....	0.13	0.09	0.08	0.09	0.10	0.10	0.09
London .....	0.25	0.13	0.12	0.11	0.12	0.15	0.09
Manchester City.....	0.11	0.06	0.08	0.13	0.10	0.10	0.12
155 Smaller Towns .....	0.09	0.09	0.09	0.09	0.09	0.09	0.09

## EXAMINATION OF "CONTACTS."

So far as was practicable, swabs were taken from the throats and noses of members of each family under 14 years of age in which there had occurred a positive case of diphtheria.

In all, 1,254 persons were swabbed and 86, or 6.9 per cent., were found to be harbouring the diphtheria bacillus.

With a few exceptions these were admitted to Monsall Hospital and kept under observation until three successive swabs proved negative.

## SUPPLY OF ANTITOXIN.

Diphtheria antitoxin (in phials containing 8,000 units concentrated) supplied free to all medical practitioners in the City and may be obtained by them at any time during office hours from the Public Health Office or from the district police stations at any time during the day or night. The total quantity supplied in this manner was 6,000,000 units (or 750 phials), at cost of £328.

## DIPHTHERIA IMMUNISATION.

The "Schick" test is a simple means of gauging the susceptibility of individuals to diphtheria infection. The knowledge thus gained enables subsequent immunisation of susceptible persons to be carried out. T

value of this procedure has been proved in this and other countries. At Monsall Hospital a considerable amount of work has been done on these lines with successful results, and it is now the practice to test and immunise all members of the nursing staff employed at the hospital. The extended application of these methods would materially increase control over the disease, and the measures to be taken towards this end are under consideration.

On October 1st, as a preliminary to the launching of a scheme for the immunisation of children of school, and pre-school age, diphtheria prophylaxis was offered free of charge to any persons desirous of being protected.

Up to December 31st, 53 "Schick" tests were performed, of which 17 were negative, 35 positive, and 1 pseudo-positive. 33 positive reactors were subsequently immunised, and 96 children were protected without preliminary "Schick" Testing.

#### VIRULENCE TESTS.

The value of testing the virulence of diphtheria bacilli in certain cases lies in the fact that, in the past, harbourers of the bacillus have been kept in isolation, sometimes for long periods, irrespective of whether or not the organisms present were virulent. In cases where the test is negative the organisms are incapable of provoking disease, and isolation of the individual is unnecessary and uneconomic.

Table V. shows that during the year virulence tests were carried out in 31 cases, with 23 positive and 8 negative results.

TABLE V.  
VIRULENCE TESTS, 1927.

Nature of case	Number in which diphtheria bacilli were present	Result of test	
		Virulent	Non-virulent
Diphtheria Cases . . .	12	12	—
Diphtheria "Contacts" . .	8	7	1
Persons with Rhinitis . .	7	3	4
Other Cases . . . . .	4	1	3
Total . . . . .	31	23	8

### \* ENTERIC FEVER.

The number of cases of enteric fever occurring during 1927 was 18.

Table I. shows the attack and death-rates compared with those for England and Wales since 1908.

TABLE I.

#### INCIDENCE OF AND DEATH-RATE FROM ENTERIC FEVER IN MANCHESTER.

*Number of Notified Cases, Deaths, and Death-rates per 1,000 living from Enteric Fever in each of Twenty successive Years.*

YEAR	1908	1909	1910	1911	1912	1913	1914	1915	1916
No. of cases notified	393	369	358	256	242	292	156	174	78
No. of deaths. ....	75	71	62	46	43	47	34	46	22
Death - rate — Manchester .....	0.11	0.13	0.09	0.07	0.06	0.06	0.05	0.06	0.03
Death - rate — England and Wales...	0.07	0.06	0.05	0.07	0.04	0.04	0.05	0.04	0.03

YEAR	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
No. of cases notified and accepted . . .	86	68	90	54	74	36	50	103	65	30	18
No. of deaths . . .	10	10	19	13	12	4	8	14	8	9	5
Death-rate — Manchester . . . . .	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.01
Death-rate — England and Wales..	0.03	0.03	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01

\* Including typhoid and paratyphoid.

Table II. shows at what ages enteric fever appears to be most prevalent, and also at what ages it is most fatal.

TABLE II.

ENTERIC FEVER.—NUMBER OF ATTACKS, OF DEATHS, AND CASE FATALITY PER CENT. AT DIFFERENT AGES FOR THE THIRTY-SEVEN YEARS, 1891-1927.

Ages	1891-1927		
	Attacks	Deaths	Case Fatality Per cent.
Under one year .. . . .	20	9	45·0
1 to 2 years .. . . .	56	8	14·3
2 „ 3 „ .. . . .	119	16	13·4
3 „ 4 „ .. . . .	173	22	12·7
4 „ 5 „ .. . . .	227	25	11·0
5 „ 6 „ .. . . .	263	28	10·6
6 „ 7 „ .. . . .	262	26	9·9
7 „ 8 „ .. . . .	246	20	8·1
8 „ 9 „ .. . . .	259	22	8·5
9 „ 10 „ .. . . .	258	26	10·1
10 „ 15 „ .. . . .	1,482	160	10·8
15 „ 20 „ .. . . .	1,619	291	18·0
20 „ 25 „ .. . . .	1,567	307	19·6
25 „ 35 „ .. . . .	2,319	540	23·3
35 „ 45 „ .. . . .	1,140	333	29·2
45 and over .. . . . .	793	266	33·5
All ages .. . . . .	10,803	2,099	19·4

TABLE III.

 ENTERIC FEVER ATTACKS IN WEEKS REPORTED IN 1927, ACCORDING TO  
 DATE OF ONSET.

FIRST QUARTER		SECOND QUARTER		THIRD QUARTER		FOURTH QUARTER		
Week of Year	1927	Week of Year	1927	Week of Year	1927	Week of Year	1927	
I	I	14	I	27	—	40	I	
2	I	15	—	28	—	41	—	
3	I	16	—	29	—	42	—	
4	—	17	—	30	—	43	I	
5	I	18	—	31	I	44	—	
6	—	19	I	32	—	45	—	
7	—	20	I	33	—	46	—	
8	—	21	I	34	—	47	—	
9	—	22	—	35	2	48	I	
10	—	23	—	36	—	49	I	
11	—	24	—	37	—	50	—	
12	2	25	I	38	—	51	—	
13	—	26	—	39	—	52	—	
Total ..		6	Total ..	5	Total ..	3	Total ..	4

City total, 1927—18.

TABLE IV.

ENTERIC FEVER MORTALITY, 1927.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1922	1923	1924	1925	1926	Mean	1927
England and Wales... ..	10.0	10.0	10.0	10.0	10.0	10.0	10.0
London ... .. .... ..	10.0	10.0	10.0	10.0	10.0	10.0	10.0
CITY OF MANCHESTER.. ..	10.0	10.0	10.02	10.0	10.0	10.0	10.0

#### *Number of Cases.*

Twenty-six cases of enteric fever were notified in 1927, one of which was included in the records of 1926. In 8 others the diagnosis was subsequently amended. In one case, notified in 1928, the onset of illness was in 1927. Eighteen persons thus contracted enteric fever during the year, 14 of whom were infected by *B. typhosus* and 4 by *B. paratyphosus* B. In two of the typhoid cases the blood gave a negative Widal reaction, but the diagnosis was adhered to by the medical attendant.

#### *Source of Infection.*

In one instance the origin was due to direct infection from another person suffering from the disease. Three others had eaten shellfish at a time prior to the attack compatible with infection being derived from that source, but no evidence of cause and effect was forthcoming. In the remainder the origin remained obscure.

#### *Examination of Contacts.*

Medical practitioners were requested to submit blood specimens from 44 household contacts. 23 specimens were obtained, 5 of which gave positive Widal reactions in some degree. These were from persons who were in apparent health, and bacteriological examinations in each case were carried out with negative results.

#### *Typhoid Carriers.*

No new "carriers" were discovered. One (M 40), who for many years has been under observation, died recently from tuberculosis.

### CEREBRO-SPINAL FEVER.

Nine cases of cerebro-spinal fever were notified in 1927, the diagnosis being confirmed in eight cases by the presence of the meningococcus in the cerebro-spinal fluid. The age and sex of those affected and the dates of onset of illness were as follows :—

Sex	Age	Onset			Sex	Age	Onset		
M	1	January 19th	..	..	M	1 $\frac{3}{12}$	May 26th		
M	7	January 8th	..	..	F	31	March		
F	1 $\frac{9}{12}$	February 2nd	..	..	F	1 $\frac{3}{12}$		?	
F	8	March 22nd	..	..	M	5	November 2nd		
M	7	January 18th	..	..					

### POLIOMYELITIS.

Particulars of notified cases of poliomyelitis for 1927 are given in the following table :—

Case .	Sex	Age	Ward	Onset	Notified	Paralysis	Result—Jan.,
1	F	3	St. Clement's	Dec. 15-26	Jan. 4	?	Removed, not l
2	F	5	Levenshulme	Feb. 21	Mar. 1	Arms ..	Removed, not l
3	M	2	Harpurhey ..	Feb. 1	Mar. 8	Legs.. ..	Permanent paral
4	F	5	St. Mark's ..	Mar. 20	Mar. 29	Left arm	Permanent paral
5	M	1	St. Michael's.	Mar. 26	April 6	Legs.. ..	Permanent paral
6	F	1	Cheetham ..	Sept. 1	Sept. 18	Legs.. ..	Permanent paral
7	M	2 $\frac{6}{12}$	Moss Side E.	?	Sept. 22	Left arm	Died 28-9-27
8	F	3	All Saints ..	Sept. 28	Oct. 4	Right arm	Permanent paral
9	M	21	St. George's .	Dec. 30-26	Oct. 15	Right arm	Died 19-10-27
10	M	4	Moss Side E.	Nov. 5	Nov. 15	Legs.. ..	Recovered
11	F	3	Moss Side W.	Dec. 1	Dec. 8	Legs.. ..	Died 7-12-27
12	F	35	Longsight	?	Dec. 1	?	Died 1-12-27

## ENCEPHALITIS LETHARGICA.

Eighty-one notifications of encephalitis lethargica were received from medical practitioners in 1927. The diagnosis was accepted in 65 cases, and in the remainder was subsequently amended as follows:—Tubercular meningitis 7, cerebral haemorrhage 5, endocarditis 2, nil 2.

Of the 65 persons affected, 11 began to be ill in 1924, 10 in 1925, 12 in 1926, and 32 in 1927.

In all there were 37 deaths from this disease during the year, 12 of them being amongst persons notified in previous years.

The mortality rate amongst the notified cases was 38·5 per cent., which compares with 28·6 per cent. in 1926 and an average of 26·3 during the five years 1921 to 1925.

The distribution of cases in age groups, and the corresponding mortality, is shown in Tables I. and II.

The disease was widely spread over the City, and no connection was discovered between individual cases, except that in one house two persons were attacked. M 18 began to be ill on January 22nd, and died on February 9th. His father (M 60), began to be ill on February 10th and died 10 days later. In the latter case the diagnosis was open to some doubt, the symptoms pointing rather to cerebral haemorrhage than to encephalitis lethargica.

It is known that many of those who survive the acute illness do not fully recover their health. Information has been obtained as to the fate of persons attacked by this disease since 1918, and the results, so far as they have been ascertained, are given in Table III. During the whole period 583 cases were notified, of which 196 ended fatally, a mortality rate of 33·6 per cent. 120 remain untraced, or have not recently been visited. Of the remaining 267, 67 have entirely recovered, 104 are partially, and 96 wholly disabled.

### *Institutional Treatment.*

Cases of encephalitis lethargica in the acute stage are admitted for treatment to Monsall Hospital. Accommodation for persons suffering from the after-effects of the disease is provided by the Manchester Board of Guardians to the extent of 65 beds for children, which have been set aside for the purpose in a building at Swinton, which is in part occupied by children who are mentally defective from other causes.

The majority of the children admitted by the Guardians are wholly disabled and institutional care will be for them a continuous necessity. There is in the City, in addition to cases of this type, a large group of children and adults who would obtain benefit from periods of treatment in an institution staffed by a medical and nursing personnel with special neurological and mental experience, and in which suitable educational and training facilities are provided. Representatives of the Board of Guardians, the Education Committee, and the Public Health Committee have therefore been appointed to confer with a view to the provision of a joint scheme of institutional treatment for persons within the City who are suffering from post-encephalitis lethargica in any of its forms.

TABLE I.  
ATTACKS IN AGE GROUPS, 1927.

Years	0-5	5-10	10-20	20-30	30-40	40-50	50 and over	All ages
Males .. . . . .	1	5	4	4	2	7	4	27
Females .. . . . .	3	2	4	11	7	6	5	38
Total .. . . . .	4	7	8	15	9	13	9	65

TABLE II.  
MORTALITY IN AGE GROUPS, 1927.

Years	All Ages	0-10	10-20	20-30	30-40	40-50	50 and over
Number of Cases .. . . . .	65	11	8	15	9	13	9
Number of Deaths .. . . . .	25	7	1	3	..	6	8
Mortality Rate .. . . . .	38·5	63·6	12·5	20·0	..	46·1	88·8

STATE OF ENCEPHALITIS LETHARGICA PATIENTS, DECEMBER, 1927.  
(I) Patients under the age of 16 at time of notification.

(1) Patients under the age of 16 at time of notification.

BACTERIOLOGICAL EXAMINATIONS MADE FOR  
 COUNTY BOROUGH OF MANCHESTER DURING  
 YEAR 1927, PUBLIC HEALTH LABORATORY, UNIVERS  
 OF MANCHESTER.

Month	Diphtheria			Typhoid	Tuberculosis						Water	
					Sputum			Milk				
	+	-	Total	Total	+	-	Total	+	-	Total	Bacterio-logical	Chemical
January . . .	57	606	663	12	24	156	180	18	96	114	—	—
February . . .	59	366	425	19	24	126	150	16	59	75	—	—
March . . .	62	481	543	12	39	201	241	8	86	94	—	—
April . . .	49	381	430	22	33	137	170	11	49	60	—	—
May . . .	49	435	484	14	35	176	211	6	78	84	—	—
June . . .	40	374	414	5	39	123	162	7	73	80	6	—
July . . .	91	513	604	8	27	119	146	6	64	70	—	—
August . . .	45	461	506	7	32	102	134	6	46	52	—	—
September . .	97	656	753	21	26	111	137	6	52	58	—	—
October . . .	119	782	901	27	30	116	146	5	49	54	—	—
November . .	147	465	612	9	23	112	135	7	60	67	—	—
December . .	89	757	846	13	24	104	128	6	29	35	4	—
Total . . .	904	7277	8181	169	356	1584	1940	102	741	843	10	—

Total specimens enumerated above—11,143. Other investigations 518, as under

Milks—Coli, etc. . . . .	348
Chemical examination . . . . .	34
Fæces and urine (for typhoid, tuberculosis, dysentery, etc.) . . .	47
Pleural fluid . . . . .	18
Cerebro-spinal fluid . . . . .	14
Diphtheria virulence tests . . . . .	40
Food poisoning . . . . .	8
Blood (for malaria) . . . . .	3
Swab and blood (for puerperal fever) . . . . .	1
Gravel from swimming baths . . . . .	2
Disinfectant . . . . .	1
Fæces, haemorrhagic jaundice . . . . .	1
Swab, Vincent's Angina . . . . .	1
Total . . . . .	518

## MEASLES AND GERMAN MEASLES.

(NOTIFIABLE IN JANUARY, 1916.)

The numbers notified were in the respective quarters of—

Diseases Notified	1927				
	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
<b>MEASLES—</b>					
By Doctors ... ...	169	460	1,744	8,134	10,507
,, Others ... ...	26	115	567	2,772	3,480
<b>Total ... ...</b>	<b>195</b>	<b>575</b>	<b>2,311</b>	<b>10,906</b>	<b>13,987</b>
<b>GERMAN MEASLES—</b>					
By Doctors ... ...	43	109	106	91	349
,, Others ... ...	1	23	20	14	58
<b>Total ... ...</b>	<b>44</b>	<b>132</b>	<b>126</b>	<b>105</b>	<b>407</b>

The deaths from measles in successive years are shown in the following table :—

**TABLE I.**  
**DEATHS FROM MEASLES IN THE CITY OF MANCHESTER DURING THE**  
**TEN YEARS 1918-1927.**

Years	Under One Year			Years of Age					Total 5 Years and upwards	Total deaths at all ages
	Under 3 Months	3-5 Months	6-11 Months	1-	2-	3-	4-			
1918	0	2	38	55	26	21	13	11		166
1919	0	2	24	37	18	11	3	9		104
1920	0	8	45	67	39	17	15	19		210
1921	2	0	0	1	1	0	0	1		5
1922	1	6	83	159	65	13	10	17		354
1923	0	2	12	46	15	3	2	3		83
1924	2	5	63	168	62	25	28	17		370
1925	2	0	25	46	24	17	9	6		129
1926	1	2	29	80	26	9	4	5		156
1927	1	5	39	65	23	14	9	8		164

TABLE 2.

 INCIDENCE OF MEASLES IN MANCHESTER DURING THE YEAR 1927  
 ACCORDING TO AGE GROUPS.

Disease	Under 5 years	5 years and over	Total
Measles .. . . . .	8,686	5,301	13,987

TABLE 3.—MEASLES, DEATHS IN QUARTERS.

YEAR	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Whole Year
1901-1910 (mean)..	80	122	68	59	329
1911-1920 (mean)..	87	125	33	32	277
1921 .....	1	2	0	2	5
1922 .....	1	162	161	30	354
1923 .....	13	42	21	7	83
1924 .....	39	295	34	2	370
1925 .....	17	27	8	77	129
1926 .....	117	36	1	2	156
1927 .....	3	2	11	148	164

In table 4 is given a comparison of Manchester mortality with that occurring in other districts.

TABLE 4.—MEASLES MORTALITY RATES.—RATE PER 1,000 LIVING,  
COMPARED WITH MEAN OF FIVE YEARS.

	1922	1923	1924	1925	1926	Mean 5 years	1927
England and Wales ...	0.15	0.14	0.12	0.13	0.09	0.13	0.09
107 Great Towns .....	0.22	0.15	0.18	0.17	0.12	0.17	0.12
London .....	0.35	0.08	0.29	0.08	0.02	0.16	0.04
CITY OF MANCHESTER ...	0.47	0.11	0.48	0.17	0.20	0.29	0.21
155 Smaller Towns.....	0.10	0.19	0.08	0.15	0.07	0.12	0.07

The distribution of the deaths in wards for 1927 shows that the death-rate was highest in Collyhurst (0.76) and St. Clement's (0.76), followed by Moss Side East (0.43), St. Luke's (0.40), St. Michael's (0.40) and New Cross (0.37).

The above table shows that in 1927 the death-rate from measles was in Manchester considerably higher than that for the country generally.

### WHOOPING COUGH.

The cases of this disease notified are obtained entirely through the schools, and the same disabilities attach to this mode of notification as were experienced in measles. Notwithstanding, these notifications are useful. The cases are visited and dealt with by the Health Visitors in the same manner as cases of measles.

The highest death-rates in 1927 are, in St. Clement's (0.91), Miles Platting (0.44), Collyhurst (0.42), Ardwick (0.32), Beswick (0.28), and All Saints (0.26).

Whooping cough notifications during 1927 :—

	First quarter	Second quarter	Third quarter	Fourth quarter	Total
1927 .....	1,157	650	226	211	2,244

TABLE I.

WHOOPING COUGH MORTALITY.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1922	1923	1924	1925	1926	Mean 5 years	1927
England and Wales .....	0.16	0.10	0.10	0.15	0.10	0.12	0.09
107 Great Towns .....	0.19	0.12	0.12	0.18	0.10	0.14	0.10
London .....	0.25	0.09	0.11	0.19	0.05	0.14	0.12
CITY OF MANCHESTER.....	0.13	0.24	0.15	0.27	0.08	0.17	0.10
155 Smaller Towns.....	0.15	0.10	0.09	0.14	0.11	0.12	0.08

TABLE 2.—WHOOPING COUGH, DEATHS IN QUARTERS.

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Whole Year
1911-1920 (Mean)...	59	73	24	17	173
1921 .....	40	78	31	20	169
1922 .....	24	37	25	13	99
1923 .....	48	113	12	11	184
1924 .....	26	53	10	27	116
1925 .....	89	81	23	13	206
1926 .....	16	18	15	12	61
1927 .....	72	35	9	8	124

TABLE 3.

INCIDENCE OF WHOOPING COUGH (KNOWN CASES) IN MANCHESTER DURING THE YEAR 1927, ACCORDING TO AGE GROUPS.

Disease	Under 5 years	5 years and over	Total
Whooping Cough .....	1,585	659	2,244

Whooping cough has, in Manchester, during the last 10 years, caused more deaths than scarlet fever and diphtheria together. The number of deaths certified as being due to whooping cough during this period was 1,413, compared with 379 deaths from scarlet fever and 720 deaths from diphtheria. (See table below).

YEAR	WHOOPING COUGH		MEASLES		SCARLET FEVER		DIPHTHERIA	
	Known Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1918 . . .	5,738	330	8,448	166	779	21	518	58
1919 . . .	1,000	40	8,420	104	1,758	26	471	41
1920 . . .	2,290	84	10,635	210	3,829	46	914	67
1921 . . .	4,415	169	1,135	5	5,400	59	1,002	90
1922 . . .	2,160	99	19,659	354	3,618	55	806	79
1923 . . .	3,804	184	3,482	84	1,920	31	564	47
1924 . . .	1,706	116	18,349	370	1,784	33	570	53
1925 . . .	3,333	206	7,941	129	2,869	63	1,040	91
1926 . . .	2,094	61	10,953	156	2,259	25	1,145	103
1927 . . .	2,244	124	13,987	164	1,823	20	1,208	91
Total . . .	28,784	1,413	103,009	1,742	26,039	379	8,238	720
Manchester— Case fatality rate per cent.	4.9		1.7		1.5		8.8	

It should be pointed out that the estimated number of cases (28,784) occurring during the 10 years does not represent all the actual cases. Since this disease is not notifiable by medical practitioners, many cases escape our notice.

## DIARRHŒA.

TABLE I.—1927.—DIARRHŒA AND SIMPLE CHOLERA MORTALITY:  
DEATHS UNDER TWO YEARS OF AGE PER 1,000 BIRTHS,  
COMPARED WITH THE MEAN OF FIVE YEARS.

	1922	1923	1924	1925	1926	Mean 5 years	1927
England and Wales.....	6.2	7.7	7.3	8.4	8.7	7.7	6.3
107 Great Towns .....	7.6	9.9	9.2	10.8	11.8	9.9	8.3
London .....	7.1	10.2	8.4	10.6	11.8	9.6	7.5
CITY OF MANCHESTER.....	11.3	12.2	11.1	15.1	16.3	13.2	11.5
155 Smaller Towns.....	5.6	6.4	6.2	7.6	6.6	6.5	5.0

The number of deaths in successive years, and their distribution in quarters of the year, are exhibited in the following figures:—

TABLE 2.—DIARRHŒA AND SIMPLE CHOLERA DEATHS IN QUARTERS,  
1918–1927.

	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
First Quarter ....	30	28	45	59	38	53	51	40	41	32
Second Quarter ..	31	27	54	59	59	45	51	38	43	34
Third Quarter ...	54	59	63	139	44	40	46	93	60	49
Fourth Quarter ..	32	56	88	130	50	64	63	56	93	36
	147	170	250	387	191	202	211	227	237	151

In 1927 the temperature during the third quarter was about the average, whilst the rainfall was higher than the average.

TABLE 3.

Third Quarter of the years	Mean Temperature	Rainfall, Inches	Humidity, per cent.	Diarrhoea and Simple Cholera Mortality. Annual Rate (third quarter) per 1,000 living
1891-1900 Mean	59°·2	9·9	76 %	4·04
1901-1910 Mean	59°·1	8·5	77 %	2·81
1911-1920 Mean	59°·4	9·6	78 %	1·32
1921-1925 Mean	59°·0	10·6	79 %	0·39
1926	61°·8	9·9	76 %	0·31
1927	59°·2	14·7	80 %	0·26

### DYSENTERY.

Two cases of dysentery, both in children, and both proved to be due to the Flexner bacillus, were notified by general practitioners during the year. These cases recovered with hospital treatment. Two deaths from dysentery were certified which had not been previously notified.

During the year the 15 cases of dysentery and 12 carriers, which are known to the department, have been visited each six months. The investigation of the health of the members of the patients' families so far revealed no suspicious symptoms.

### MALARIA.

Three cases of malaria were notified during 1927. The patients contracted the disease whilst living abroad..

There was one death from this disease, which was contracted whilst serving in the army in Salonika.

### TRENCH FEVER.

There were no cases of trench fever notified during the year.

### ANTHRAX.

No cases of anthrax were notified during the year 1927.

## VENEREAL DISEASES.

The arrangements made in Manchester for the diagnosis and treatment of venereal diseases were described in detail in the Annual Report for 1920, and any modification of the scheme has been noted in subsequent reports.

There are five main centres in the City and one in Salford. At the Manchester centres, 15 male and 20 female clinics are held each week at the times shown in the table on page 56.

In addition to the clinics at these centres, one pre-maternity clinic is held at two of the child welfare centres each week, where mothers and babies suffering from venereal diseases are examined and receive treatment.

Intermediate treatment for male and female patients is given each weekday at St. Luke's Hospital between the hours of 10 a.m. and 5 p.m., and at St. Mary's Hospital for Women on one evening each week.

The auxiliary centre for females which was established in the grounds of Monsall Hospital in 1920 is also open daily for the intermediate treatment of patients attending any of the authorised clinics or who are sent for the purpose by medical practitioners. The centre forms a valuable addition to the original scheme, and the attendance of patients continues to improve. Details of the work are given in Table III.

The number of new cases of syphilis treated at the centres during the year was 1313, and of gonorrhœa 1,680. Comparison shows that whereas, in the early years of the established scheme, the number of cases of syphilis greatly exceeded the number of gonorrhœa cases, the position is now reversed, and, although the figures in no way represent the relative incidence of the two diseases amongst the population, there is no doubt that with the facilities for treatment now provided there is less reluctance on the part of infected persons in presenting themselves than was formerly the case.

The total number of persons attending the several clinics in the City during 1927 was 8,770, which compares with 7,858 in 1926 and 8,330 in 1925. The increase in 1927 is, in part, accounted for by the larger number of persons presenting themselves who were found not to be suffering from venereal disease, which suggests an increasing readiness on the part of those who have been exposed to infection to submit themselves for examination.

A considerable number of persons, amounting to rather more than one-fourth of the total, cease to attend each year before completion of the treatment, or before the final tests as to cure have been carried out. Such a figure is disappointing, and the position is serious both from the patient's point of view and from a public health standpoint. In order to encourage continuance of treatment letters are sent from the hospitals to defaulters, and this procedure is successful in a certain number of instances.

### MEDICAL PRACTITIONERS AND THE SCHEME.

Members of the medical profession in the City are from time to time advised of the facilities offered for the diagnosis and treatment of venereal disease. In the circular-letter sent out the arrangements are given in detail under the following heads :—

1. Provision of laboratory facilities for diagnosis.
2. Treatment centres and clinics.
3. Supply of approved arsenobenzene compounds.
4. The auxiliary centre for females.
5. Instructions to medical practitioners, patients, and the public.

The attendance of medical practitioners at the several clinics during the year is shown in the following table :—

Particulars	Manchester Royal Infirmary	Ancoats Hospital	Skin Hospital	St. Luke's Hospital	St. Mary's Hospital	Total
Number of Medical Practitioners attending Clinic ... ... ...	8	6	Nil	1	Nil	15
Number of attendances.	64	..	Nil	1	Nil	65

At the end of 1927 there were 44 medical practitioners who were qualified to receive approved arsenobenzene compounds free of cost.

During 1927, 1,136 doses of these drugs were issued to medical practitioners. The number of Manchester patients treated by them was 96. The number discharged after a full course of treatment was 28, and the number under observation at the end of the year was 58.

3,421 Wassermann outfits and 331 microscopic outfits were issued, and Table IV. shows the pathological work done in connection with this part of the scheme.

### PUBLICITY.

Posters giving the location of treatment centres, both for males and females, and the days and hours of the clinics, are displayed in all public conveniences.

In connection with education in health it is noteworthy that there is an increasing demand for lectures and addresses which the Public Health Department is prepared to organise. 190 lectures were given to social organisations and 30 to large firms, as compared with 122 and 23 respectively for the previous year. Groups, rather than single lectures, are now more in demand, and it is clear that the Department is meeting a need in a manner which is generally appreciated.

A health week was held in February, when films dealing with venereal diseases were shown in the various district halls.

## FINANCE.

A statement prepared by the City Treasurer shows that the total net expenditure on the scheme for the year 1927 was as follows :—

A.—*Apportionable Expenditure.*

	£ s. d.
Manchester University, Department of Pathology ..	362 0 0
Ancoats Hospital .. .. .. .. .. .. ..	2,617 11
Manchester and Salford Hospital for Skin Diseases ..	1,734 14
St. Luke's Hospital .. .. .. .. .. ..	3,381 1
Manchester Royal Infirmary .. .. .. .. ..	2,784 18
St. Mary's Hospital .. .. .. .. .. ..	1,059 19
	<hr/>
	£11,940 5

B.—*Non-apportionable Expenditure.*

	£ s. d.
Treatment of Manchester patients by other Local Authorities .. .. .. .. .. ..	341 14
Approved Arsenobenzene Compounds issued by the Medical Officer of Health .. .. .. .. ..	208 2
Maternity and Child Welfare Centres .. .. .. ..	365 9
Auxiliary Centre for Females .. .. .. .. ..	532 11
Publicity .. .. .. .. .. ..	383 2 1
Printing, Stationery, and Advertising .. .. .. ..	62 18
Administration Expenses .. .. .. .. ..	440 7
	<hr/>
	£2,334 7
Total expenditure for year .. .. ..	<hr/> <hr/> £14,274 12 1

Of this total, £3,405 5s. od. has been apportioned among other local authorities, and the balance of £10,869 7s. 1od. falls to Manchester.

Again a satisfactory result is recorded in the total cost per attendance of 4s. 3·52d., which is a reduction of approximately 5d. on the figure of 4s. 8·46d. for last year. This reduction in unit cost has been continuous since the year ended 31st December, 1925, which was the first occasion since 1919 that an diminution of cost could be reported. The total reduction from the figure of 1925 is 6·34d. per out-patient attendance, and has been achieved by economic effected through negotiations with the hospital authorities combined with the influence of increased attendances on overhead charges during 1927.

An outstanding feature is the general levelling of cost per unit of attendance comparing the five hospitals, the lowest being 4s. 1·81d. at St. Luke's and the highest 4s. 5·76d. at the Manchester Royal Infirmary, a difference of 3·95d. only, whilst the disparity last year was 1s. 2·5d.

The tendency towards uniformity in cost per out-patient attendance suggest that, comparing one centre with another, a reasonable return of service has been obtained for the expenditure involved.

The Treasury continues to pay 75 per cent. of the expenses of the Venereal Diseases Scheme in Manchester.

No action under the Venereal Disease Act, 1917, has been taken during the year.

**EXTRACT FROM A REPORT ON THE WORK DONE AT THE VENEREAL DEPARTMENT OF THE CRUMPSALL INFIRMARY (MANCHESTER UNION) DURING THE YEAR ENDED DECEMBER 31ST, 1927.**

The Medical Officer of the Crumpsall Infirmary supplies the following figures :—

**ADMISSIONS.**

*Total Admissions.*

	Syphilis	Soft Chancre	Gonorrhœa
Males . . . . .	119	..	96
Females . . . . .	93	..	78
	212	..	174

*Admission of Patients from other Unions (included in above figures).*

	Syphilis	Soft Chancre	Gonorrhœa
Males . . . . .	20	..	24
Females . . . . .	27	..	30
	47	..	54

There were 28 births in this department of the Infirmary during the year.

*Persons Treated with Approved Arsenobenzene Compounds.*

	Manchester Union	Other Unions
Total number—Males . . . . .	99	20
Females . . . . .	66	27
	165	47

The total number of injections of approved arsenobenzene compounds was 648.

*Pathological Examinations.*

The number of Wassermann examinations carried out totalled 430; and examinations for detection of gonococci 601.

There were two still-births and no abortions during the year.

MANCHESTER AND SALFORD APPROVED CENTRES FOR THE TREATMENT OF VENEREAL DISEASES, 1927.

ROYAL INFIRMARY, OXFORD ROAD, MANCHESTER	ANCOATS HOSPITAL, MILL STREET, ANCOATS, MANCHESTER	HOSPITAL FOR SKIN DISEASES, QUAY STREET, MANCHESTER	ST. LUKE'S HOSPITAL, DUKE STREET, LIVERPOOL ROAD, MANCHESTER
Skin Clinic— Thursday ...11 a.m. (females and children) Wednesday ...6 p.m. (males) <i>Genito-Urinary Clinic</i> — Wednesday ...11 a.m. (females and children) Thursday ...6 p.m. (males) <i>Skin and Genito-Urinary Clinic</i> — Monday... ...6 p.m. (males)	Skin Diseases— Wednesday ...11-30 a.m. (females) Wednesday ...5-30 p.m. (males) Saturday and Wednesday ...11-30 a.m. (females) Wednesday ...5-30 p.m. (males) Saturday	Skin Clinic only— Daily except Sunday— For men ...9-o to 10-o a.m. For women and children— 9-o to 11-o a.m. <i>Genito-Urinary Diseases</i> — Wednesday ...11-30 a.m. (females) Wednesday ...5-30 p.m. (males)	Monday ... Tuesday ... Thursday ... Friday ... Wednesday ...5 to 7 p.m. } females ...11 to 1 p.m. } only Daily (Sundays excepted) for irriga- tion—10 a.m. to 5 p.m.
CHILD WELFARE CENTRES (Pre-maternity Clinics)	AUXILIARY CENTRE (Females) MONSALL HOSPITAL, NEWTON HEATH, MANCHESTER	ST. MARY'S HOSPITAL, WHITWORTH STREET	SALFORD ROYAL HOSPITAL, CHAPEL STREET, SALFORD
Females only— Monday ... Wednesday ... Thursday ... Friday ... Thursday ... Tuesdays ...	45, Higher Ardwick— Fridays ...9 to 11 a.m. 42, Lower Moss Lane— Thursdays...9 to 11 a.m. ...5 o to 7 o.p.m. ...Intermediate treatment by nurse, 7 to 8 p.m.	Sunday ...10-30 a.m. to 12-30 p.m. Monday ...9-30 a.m. to 12 noon ...4 to 8-30 p.m. Tuesday ...9-30 a.m. to 12-30 p.m. ...2 to 5-30 p.m. Wednesday...9-30 a.m. to 12-30 p.m. ...2 to 5-30 p.m. Thursday ...9-30 a.m. to 12-30 p.m. ...2 to 5-30 p.m. Friday ...9-30 a.m. to 12 noon ...4-30 to 8-30 p.m. Saturday ...9-30 a.m. to 1-30 p.m. The Centre is closed first Sunday in every month.	Skin Department— Monday ...12-0 noon (males and females) Wednesday...6-o p.m. (females) ...7-o p.m. (males) <i>Special Genito-Urinary Clinic</i> — Tuesday ...12-0 noon } (males and Friday ...6-o p.m. } females)

Syphilis	Soft Chancre				Gonorrhœa				Conditions other than Venereal				Total	
	Males		Females		Males		Females		Males		Females		Males	Females
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females		
1. Number of cases which—														
(a) at the beginning of the year under report were under treatment or observation for .. . . . .	1,209	899	11	..		1,724	258	45	114	2,989	1,271			
(b) had been marked off in a previous year as having ceased to attend or as transferred to other Centres, and which returned to the Treatment Centre during the year under report suffering from the same infection.. . . . .	18	40	..	..		15	15	..	3	33	58			
Total—Items 1 (a) and 1 (b) .. . . . .	1,227	939	11	..	1,739	273	45	117	3,022	1,329				
2 (a). Number of cases dealt with at the Treatment Centre during the year for the first time.. . . . .	876	498	69	..	1,454	279	722	521	3,121	1,298				
Total—Items 1 (a), 1 (b), and 2 (a).. . . . .	2,103	1,437	80	..	3,193	552	767	638	6,143	2,627				
2 (b). Number of cases included in Item 2 (a) known to have received previous treatment at other Centres for the same infection.. . . . .	35	26	..	..	39	14	..	2	74	42				
3. Number of cases which ceased to attend—														
(a) Before completing the first course of treatment for .. . . . .	201	132	..	..	589	156	5	65	795	353				
(b) After one or more courses, but before completion of treatment for .. . . . .	220	146	..	..	135	6	..	..	355	152				
(c) After completion of treatment, but before final tests as to cure of .. . . . .	137	55	..	..	254	20	..	..	391	75				
4. Number of cases transferred to other Treatment Centres after treatment for .. . . . .	86	54	..	..	124	37	..	3	210	94				
5. Number of cases discharged after completion of treatment and observation for .. . . . .	151	70	64	..	239	56	703	452	1,157	578				
6. Number of cases which, at the end of the year under report, were under treatment or observation for .. . . . .	1,308	980	16	..	1,852	277	59	118	3,235	1,375				
Total—Items 3, 4, 5, and 6 .. . . . .	2,103	1,437	80	..	3,193	552	767	638	6,143	2,627				
7. Out-patient attendances—														
(a) For individual attention by the Medical Officer .. . . . .	17,937	11,895	192	..	13,924	4,581	1,594	1,850	33,647	18,326				
(b) For intermediate treatment—e.g., Irrigation, dressings, etc... . . . . .	1,672	..	3,154	..	12,990	5,694	..	98	17,816	5,792				
Total attendances .. . . . .	19,609	11,895	3,346	..	26,914	10,275	1,594	1,948	51,43	24,118				
8. Aggregate number of "In-patient days" of treatment given to persons who were suffering from .. . . . .	548	415	17	..	526	677	..	..	1,091	1,092				

## AUXILIARY CENTRE FOR FEMALES AT MONSALL HOSPITAL.

TABLE III.—SHOWING NUMBER OF PERSONS TREATED AT THE CENTRE DURING

PARTICULARS	Gonorrhœa	Syphilis and Gonorrhœa	Not V.D.
1. Number of females who on 1st January, 1927, were under treatment for .. .. .. ..	29	2	—
2. Number of new patients who attended during the year for the first time— (a) Name of Clinic from which patient came— Ancoats Hospital .. .. .. .. Manchester Royal Infirmary .. .. .. St. Mary's Hospital .. .. .. .. Child Welfare Centres .. .. .. ..	23 10 1 7	4 .. .. ..	1 .. .. 1
(b) Cases referred to the Centre by Medical Practitioners .. .. .. .. ..	12	..	2
3. Old patients who have returned for treatment after discontinuing attendance for some time— (a) From Clinics— Ancoats Hospital .. .. .. .. Manchester Royal Infirmary .. .. ..	7 1	.. ..	.. ..
Total item 2 (new patients) .. .. .. ..	53	4	4
Total items 1, 2, and 3—Total patients attending during 1927 .. .. .. .. ..	90	6	4
4. Cases discharged cured :— (a) Ancoats Hospital .. .. .. .. Manchester Royal Infirmary .. .. .. St. Mary's Hospitals .. .. .. .. Child Welfare Centres .. .. .. .. (b) Medical Practitioners' Cases .. .. ..	16 6 1 3 13	2 .. .. .. ..	1 .. .. 1 2
Total item 4.—Cases discharged cured .. ..	39	2	4
5. Discontinued attendance .. .. .. ..	27	2	..
6. Transferred to other Clinics .. .. .. ..	..	..	..
7. Number of patients still attending on Jan. 1st, 1928 .. .. .. .. .. .. ..	24	2	..

The number of new cases was 61, which compares with 48 in the previous year. Almost half the cases came from Ancoats Hospital.

The total number of attendances was 3,373, an average of 33.7 per case, there being 41 patients who attended on more than 30 occasions. The patients continue to attend treatment much more regularly at this centre than they do at the other three centres in the City.

722 Sitz baths were given during the year.

TABLE II.—SHOWING THE WORK DONE AT FIVE VENEREAL DISEASE CLINICS AND AT TWO CHILD WELFARE CENTRES DURING THE YEAR 1927.

PARTICULARS	MANCHESTER ROYAL INFIRMARY				ANCOATS HOSPITAL				HOSPITAL FOR SKIN DISEASES				ST. LUKE'S HOSPITAL				ST. MARY'S HOSPITAL				CHILD WELFARE CENTRE, HIGHER ARDWICK				CHILD WELFARE CENTRE, LOWER MOSS LANE				TOTALS FOR THE YEAR				GRAND TOTALS—ALL CASES (Compared with corresponding figures for 1926)												
	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	*G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.													
	New Cases— All Cases	436	..	510	88	332	..	360	409	286	..	63	152	220	69	655	288	68	..	100	216	21	..	6	54	11	..	9	36	1,374	69	1,733	1,243	4,419	..	3,911	..								
Cases discharged after completion of treatment— All Cases	45	..	97	87	120	..	142	409	28	..	..	152	14	64	37	285	9	..	16	138	5	..	2	54	..	..	1	30	221	64	295	1,155	1,735	1,120											
cases ceasing to attend Clinic— (A) Before completing the first course of treatment for— All Cases	103	..	236	..	..	..	..	..	92	..	..	..	94	..	458	..	36	..	47	70	7	..	..	..	1	..	4	..	333	..	745	70	1,143	..	1,091										
B After one or more courses, but before completion of treatment for— All Cases	34	..	..	..	129	..	141	..	120	..	..	..	74	..	..	..	..	..	..	..	3	..	..	..	6	..	..	..	366	..	141	..	507	..	253										
C After completion of treatment, but before final tests as to cure of— All Cases	67	..	37	..	98	..	78	..	9	..	..	..	16	..	158	..	..	..	..	..	1	..	1	..	1	..	..	..	192	..	274	..	466	..	376										
(X) Transferred to other Treatment Clinics— All Cases	54	..	61	..	..	..	..	..	61	..	63	..	21	..	31	..	4	..	6	3	..	..	..	..	..	..	..	140	..	161	3	304	..	168											
Attendances at the Out-patient Clinic— All Cases	7,423	..	4,737	148	7,216	..	3,877	721	7,151	..	63	272	5,531	192	7,952	725	1,540	..	1,677	1,341	440	..	25	129	531	..	174	108	29,832	192	15,505	3,444	51,973	72,208	44,931										
Intermediate treatment	..	..	..	..	..	..	..	..	..	..	..	..	1,672	3,154	14,958	..	..	..	353	98	..	..	..	..	..	..	..	1,672	3,154	15,311	98	20,235	..	19,952											
In-patient Days— All Cases	50	..	..	..	..	..	..	..	9	..	212	..	..	..	701	17	1,194	..	..	..	..	..	..	..	..	..	..	..	963	17	1,203	..	2,183	..	2,442										
Doses of approved Arsenobenzoi Compounds given— All Cases	2,115	..	..	..	2,586	..	..	..	963	..	..	..	1,966	..	..	..	988	..	..	..	345	..	..	..	223	..	..	..	9,186	..	..	..	9,186	..	7,868										
Pathological Examinations made— A. (Centre)— All Cases	..	Wass.	Spir.	Gon.	..	Wass.	Spir.	Gon.	..	Wass.	Spir.	Gon.	..	Wass.	Spir.	Gon.	..	Wass.	Spir.	Gon.	..	Wass.	Spir.	Gon.	..	Wass.	Spir.	Gon.	..	Wass.	Spir.	Gon.	..	Wass.	Spir.	Gon.									
B. (Public Health Laboratory)— All Cases	..	68	851	..	1,173	..	951	..	803	16	..	..	..	53	1,910	..	..	..	262	..	..	..	..	..	..	..	..	1,976	137	3,974	..	1,976	137	3,974	..	1,773	94	3,668							
..	926	..	..	..	..	..	..	..	..	..	..	..	..	861	..	..	..	..	258	..	..	..	92	1	24	..	..	52	..	77	..	2,189	1	101	..	2,189	1	101	..	4,165	138	4,075	3,695	94	3,709

\* Gonorrhœa Cases Transferred to Other Centres.



	Wassermann Reaction		Gonococci		Spirochaetes	
	Positive	Negative	Positive	Negative	Positive	Negative
	Unstatis- factory Specimens	Total Examined	Unstatis- factory Specimens	Total Examined	Unstatis- factory Specimens	Total Examined
<b>A. Work done at the Public Health Laboratory (University Bacteriological Department):</b>						
Medical Practitioners	.. .. ..	213	507	27	3	747
Institutions other than Approved Centres	.. .. ..	94	539	24	12	657
St. Luke's Hospital	.. .. ..	178	609	38	..	825
St. Mary's Hospital	.. .. ..	63	204	16	..	283
Manchester Royal Infirmary	.. .. ..	370	490	64	..	924
Two Maternity and Child Welfare Centres	.. .. ..	35	102	6	1	143
Total work done at Public Health Laboratory	.. .. ..	953	2,451	175	16	3,579
<b>B. Work done by Hospital Pathologist:—</b>						
Ancoats Hospital	.. .. ..	Not stated	1,173	Not stated	951	Not stated
Manchester and Salford Hospital for Skin Diseases	.. .. ..	Not stated	803	..	..	Not stated
<b>C. Work done by Clinical Pathologist at Clinics:—</b>						
Manchester Royal Infirmary	.. .. ..	..	..	Not stated	851	Not stated
St. Mary's Hospital	.. .. ..	..	..	Not stated	262	..
St. Luke's Hospital	.. .. ..	..	..	Not stated	1,910	Not stated
Total of A, B, and C	.. .. ..	..	..	..	4,356	..
						..
						59

TABLE V.

Name of Hospital	MANCHESTER ROYAL INFIRMARY	ANCOATS HOSPITAL	Skin Hospital	St. LUKE'S HOSPITAL	St. MARY'S HOSPITAL	TOTALS
Number of letters sent	340	177	172	138	489	1,316
<i>Results:</i> —						
(1) No. reply .. .. ..	185	54·4	77	43·5	68	39·5
(2) Wrong addresses (letter returned) .. .. ..	..	..	27	15·3	11	6·4
(3) Replied "under own doctor" .. .. ..	22	6·5	6	3·4	8	4·7
(4) Replied "other causes for absence" .. .. ..	32	9·4	5	2·8	9	5·2
(5) Returned and still attending .. .. ..	52	15·3	3	1·7	53	30·8
(6) Returned for a period only .. .. ..	16	4·7	10	5·6	17	9·9
(7) Returned and then transferred to other Centres .. .. ..	20	5·9	4	2·3	..	..
(8) Returned and discharged	13	3·8	45	25·4	6	3·5
	340	177	172	138	489	1,316

## REPORT OF WORK DONE UNDER THE RATS AND MICE (DESTRUCTION) ACT, 1919.

The Act has been in force since January 1st, 1920.

Complaints of rat infestation are investigated by the Rat Executive Officer (Mr. W. A. Cartland), who inspects the premises complained of, and the adjacent property, to ascertain the extent of the infestation. Specifications of the work considered necessary are drawn up, and, in the case of business premises, are submitted to the occupiers in the form of a letter relating to the premises where rats have been found.

The Act places the obligation upon the occupier to take necessary and reasonably practicable steps, not only to destroy rats and mice, but also to prevent his premises becoming infested, and provides penalties. That the occupiers are solely responsible for the prevention and destruction of rats frequently makes procedure under the Act difficult. The rat proofing of buildings often involves considerable expenditure, which cost many occupiers consider ought to be shared by the owner. Again, the Act only requires "reasonably practicable steps" to be taken, and the question frequently arises whether it is reasonable to require an occupier to effect extensive repairs to the structure, paving, or drains, which may be necessary to prevent infestation recurring at his premises. In cases affecting small dwelling-house property, the assistance of the owners has been solicited, and in many cases willingly given. A number of owners have sought the advice and assistance of the Rat Executive Officer.

The condition of the structures of many of the older buildings in the City provides an easy means of passage and harbourage for rats, and in these cases it is only possible to effect partial rat proofing, which cannot be considered a permanent prevention against reinfestation.

It has also been found that when serious infestation recurs in large blocks of property, or when, in spite of persistent destruction measures, rats continue to be present, definite evidence is generally forthcoming of a communication with a defective sewer or drain, by which means the rats enter the property. When found, these defects have been dealt with appropriately.

Particular attention has again been paid to preventive work, and much time has been spent in impressing on occupiers the prime importance of the protection of foodstuffs, and of the proper storage and disposal of scrap food, food paper wrappings, organic refuse, and other materials attractive to rats. The importance of occupiers of adjacent premises co-operating in the work of rat repression has been recognised, and in all cases dealt with it has been sought, as far as possible, to secure collective action for the destruction of rats.

The Rat Executive Officer has made primary inspections at 2,175 premises during the year. This number is considerably larger than that for the previous year. The following summary shows the conditions found at the premises visited.

Interior Infestation			Exterior Infestation		No evidence of Infestation	
Business Premises	Dwelling-houses	Mice only	Business Premises	Dwelling-houses	Business Premises	Dwelling-houses
210	224	41	192	1,172	81	255
<u>475</u>			<u>1,364</u>		<u>336</u>	
Total .. 2,175						

Of the number of rat-infested premises examined, 25 per cent. showed infestation of the interior of the building and 75 per cent. showed infestation of yards, passages, and land only.

The infestation was found to be directly due to, or associated with, defective or disused drains or sewers in 78 per cent. of all rat-infested premises visited; in 39 per cent., of premises affected by interior infestation; and in 91 per cent., of premises where the infestation was confined to yards and passages only. In the remainder of the premises infested, it was found that the infestation was due to other causes, e.g., refuse dumps, improper storage of food and of waste materials attractive to rats, the nature of the business carried on, and to dilapidation of premises, etc.

## NATURE OF PREMISES REPORTED INFESTED DURING THE YEAR 1927.

Particulars of Premises	Type of Infestation		
	Interior	Yards, Passages, or Adjoining Lands only	Totals
Hotels, restaurants, cafes, public-houses, chip and fish shops .. . . . .	17	14	31
Butchers, greengrocers, fish and poultry dealers, bakers, confectioners, tripe shops, and sausage makers .. . . . .	31	24	55
Provision warehouses and grocers' shops, spice and fruit warehouses .. . . . .	19	29	48
Grain and seed warehouses, sweet shops, dairies .. . . . .	3	13	16
Destructor works, tips, stables, marine stores, rag stores, piggery, poultry keeping .. . . . .	13	23	36
Building estates, builders' stores, garages, farms, allotments .. . . . .	3	13	16
Factories and workshops.—Clothing, etc., laundry, brewery, engineering, furniture, printers, joiners, tailors, umbrella ..	45	12	57
Warehouses.—Cloth, clothing, makers-up, paper, hardware .. . . . .	23	5	28
Shops.—Outfitters, drapers, furriers, milliners, chemists, boots, stationers, newsagents, fancy goods, hairdressers, tobacconists, herbalists, hardware, costumiers .. . . . .	33	39	72
Institutions.—Hospitals, colleges, churches, schools, nursing homes .. . . . .	4	6	10
Public halls.—Cinemas, dance halls .. . . . .	2	2	4
Offices .. . . . .	7	2	9
Unoccupied premises .. . . . .	4	6	10
Miscellaneous .. . . . .	6	4	10
Dwelling-houses .. . . . .	224	1,172	1,396
Premises infested by mice only .. . . . .	41	—	41
Totals .. . . . .	475	1,364	1,839

1,199 revisits have been made during the progress of repressive measures.

At the end of the year the work was still in progress at 284 premises.

Repressive measures have been carried out in connection with 1,329 premises, as follows :—

Measures carried out	By whom carried out	Business Premises	Dwelling-houses	Totals
Destruction only	Occupier .. . . . .	16	60	76
	Owner .. . . . .	3	4	7
	Rat catcher .. . . .	7	7	14
Destruction, Proofing, and Prevention	Occupier .. . . . .	47	29	76
	Owner .. . . . .	7	22	29
	Rat catcher .. . . .	21	17	38
	Destruction by occupier.			
	Proofing by owner .. .	2	31	33
	Destruction by rat catcher.			
	Proofing by occupier .. .	31	2	33
	Destruction by rat catcher.			
Destruction by occupier.	Proofing by owner .. .	21	29	50
	Sewers by City Engineer .. .	85	632	717
	Drains by owner .. . .	39	217	256
		279	1,050	1,329

As a result of systematic examination of the drains of rat-infested premises, drainage work has been carried out as follows :—

	Premises
Drainage work completed during the year .. . . . .	311
Drainage work in progress at the end of the year .. . .	26
Notices to repair defective drains issued, or in course of preparation .. . . . .	74

The City Engineer's Department have, in conjunction with the Rat Executive Officer, made 100 examinations of undermined portions of streets and passages. In 96 cases, where the undermining was found to be due to rats, remedial measures have been undertaken. The conditions found and action taken during the year are shown as follows :—

Defective sewers requiring reconstruction .. . . . .	3
Defective sewers reconstructed .. . . . .	4
Minor defects in sewers repaired .. . . . .	46
Disused privy midden drains removed .. . . . .	81
Other disused drains removed .. . . . .	25
Outlet drains repaired .. . . . .	17
Defective drains referred to Sanitary Section .. . . . .	9
Street drain inlets repaired .. . . . .	3
Outward rat burrows, consolidated.. . . . .	15
Surface rat burrows, consolidated .. . . . .	11
Undermining due to other causes than rats .. . . . .	4

The various departments of the Corporation have carried out rat destruction on lands, buildings, and sewers under their control with the following results :—

Poison and Virus—Baits laid .. . . . .	58,825
Baits taken .. . . . .	42,161
Rats found dead .. . . . .	31
Rats killed by other means .. . . . .	2,279
Mice destroyed .. . . . .	625

Four professional rat catchers have certified to the destruction by them of 3,736 rats upon lands and buildings in the City. Difficulty has been experienced in obtaining reliable returns from other rat catchers.

#### NATIONAL RAT WEEK.

In compliance with a memorandum received from the Ministry of Agriculture, a special effort was made during Rat Week, October 31st to November 5th, 1927.

The following action was taken :—

1. Letters were sent to the appropriate Corporation Departments controlling destructor works, sewage farms, sewers, and markets respectively, urging the desirability of intensive measures being taken during the week.

2. Five hundred printed circulars and 300 typed circular-letters were sent to farmers, butchers, greengrocers, provision merchants, proprietors of cafés, and other occupiers whose premises are particularly liable to infestation by reason of their situation, or by the nature of the business carried on.
3. Two hundred posters, 30in. by 40in., calling the attention of the public to their responsibility under the Act, and giving advice as to the best methods of rat repression, were exhibited in public places within the City.
4. Press advertisements—double column 2in. wide—were placed in two local newspapers.
5. Arrangements were made with the B.B.C. to broadcast a special local announcement *re* Rat Week on October 28th.
6. Special letters were sent to 12 professional rat catchers requesting them to give keen attention to their work during Rat Week and to report results obtained and the number of rats destroyed.

## REPORT OF RESULTS, ETC., OF RAT WEEK PROPAGANDA.

Arising out of the above-mentioned complaints, 52 letters, giving an outline of the action suggested in each case, were sent to 14 owners and 38 occupiers respectively. In all the remaining cases advice was given verbally by the Rat Executive Officer.

Twenty-six other premises known to be infested were revisited during Rat Week and appropriate advice given.

834 rats were certified to have been destroyed by seven rat catchers employed privately by owners and occupiers during the week. Thirty rats and 49 mice were caught on Corporation properties.

6,928 poison baits were laid in the sewers, 3,296 of which are known to have been taken.

As no returns are available, the extent and result of other private action by the general public cannot be estimated. Within the knowledge of the Rat Executive Officer the occupiers of 85 other premises revisited in and about Rat Week were making a special effort in the work of rat repression, and the object of the propaganda appears to have become widely known.

Arising out of two requests for advice, the existence of a badly infested area, comprising 26 large business premises, was brought to the notice of the Department. The remedial and preventive measures and concerted action suggested are being attended by an unusual amount of success. Out of one premises alone in this area 147 rats were caught within the week.

The following statement shows the number of letters received and sent in connection with the work of rat repression :—

Letters received from—

General public .. . . . .	210
Corporation Departments .. . . . .	406
	— 616

Letters sent to—

Occupiers and owners .. . . . .	434
Corporation Departments .. . . . .	362
Rat Catchers .. . . . .	121
	— 917

Notices under the Rats and Mice (Destruction) Act, 1919, have been served upon the occupiers of a block of property involving nine infested premises. In this case rat destruction and preventive measures have since been proceeding satisfactorily.

## TUBERCULOSIS.

### THE SENIOR TUBERCULOSIS OFFICER'S REPORT.

By DR. D. P. SUTHERLAND.

In the report of 1926 it was noted that the death-rate from pulmonary tuberculosis had declined, and in 1927 this fall has continued. Unlike the former year, however, this has not been associated with a fall in the general death-rate, which is slightly higher.

The general respiratory mortality (excluding pulmonary tuberculosis) for the City was also higher, as there was an increase in the deaths from pneumonia and bronchitis.

The notification-rate for tuberculosis has risen slightly, although it is still, with the exception of the year 1926, the lowest figure recorded in Manchester.

Both forms of tuberculosis, namely, pulmonary and surgical, have their part in this increase, and it is of interest to note that in the pulmonary group the rise is due to a larger number of cases amongst males than females. This proportion is not only an actual increase in numbers, but is also a fractional increase in relation to the total notified cases in each sex.

The age-groups at which this increased notification has occurred is in males 5—15 and 45—65, whilst in women it occurs in the age-groups 10—15, 20—25, and 35—55.

This increase in the male notification-rate at the earlier ages and at the later middle-life period is an interesting contrast to the previous year, when we saw that the heavier incidence of notification was falling in the young adult type.

Amongst women the contrast is not so marked, although in the 25—35 age-group the decline in notification continued as in 1926, but rose sharply in the next decennial period, namely, at ages 35—45.

If we turn now to the mortality figures, we find that the decline in total deaths from pulmonary tuberculosis is due to a diminished fatality amongst males, whilst amongst females the rate is slightly increased.

The ages at which the male death-rate was lessened were from 20—45, whereas amongst women a higher death-rate occurred from 20—35, but from 35—45 their death-rate fell. At ages 10—25 an increased mortality was registered amongst women, as it was at ages 45—55. The males did not show any increased mortality at either of these age-groups, and the unusual feature emerges of a decreased mortality amongst women occurring at an age-period, e.g., 35—45, in the presence of a generally raised death-rate from the disease in the latter sex.

Coming to the non-pulmonary tuberculosis, the increased notification occurred almost entirely amongst males, and the figure for females was practically the same as that for 1926.

The death-rates for the two years were the same.

The provision now being made for the treatment of tuberculosis amongst children by the extensions at the Abergele Sanatorium will, it is hoped, be a very material asset to the City in its anti-tuberculosis work, and although the building is only at its commencement the work will be pushed on now that the necessary preliminaries have been settled.

A further extension of the City's activities lies in the provision being made for the sanatorium treatment of surgical tuberculosis amongst adults. This type of case has often to be treated at home under conditions which make satisfactory recovery very difficult, and in obtaining a number of beds under open-air conditions at a recognised hospital these cases can be treated on the most modern lines and with the greatest hope of success.

In accordance with the requirements of the Ministry of Health, it is to be noted that there have not been any cases of compensation under the Public Health (Prevention of Tuberculosis) Regulations, 1925, No. 757, during the year, nor has it been necessary to exercise the powers under Section 62 of the Public Health Act, 1925, for the compulsory removal or detention of patients.

The usual tables and statistics for the year are given in the following pages.

TABLE X.—NEW CASES AND MORTALITY DURING 1927.

Age Periods	New Cases				Deaths			
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonary	
	M.	F.	M.	F.	M.	F.	M.	F.
0	..	3	9	2	1	2	5	4
1	18	18	55	41	6	9	29	18
5	52	23	61	46	4	5	8	11
10	41	40	39	36	1	13	5	9
15	66	72	34	26	28	55	12	7
20	78	108	20	27	47	63	9	6
25	127	124	24	23	65	92	10	6
35	176	99	17	11	110	49	5	3
45	175	70	11	4	144	54	11	5
55	96	18	5	7	77	24	2	3
65 and upwards	20	14	2	3	25	7	2	2
Totals ..	849	589	277	226	508	373	98	74

The number of non-notified deaths from pulmonary tuberculosis was  $24 = 2.7$  per cent.

The number of non-notified deaths from non-pulmonary tuberculosis was  $40 = 23.2$  per cent.

The percentage of non-notified deaths from all forms of tuberculosis was 6.0.

There were, in addition, 11 deaths of non-notified cases outside Manchester which were adjudged by the Registrar-General to be properly referable to this area.

The above figures indicate that notification of pulmonary tuberculosis in the area is very complete.

Until the scheme has established its projected accommodation for non-pulmonary tuberculosis the second figure above will necessarily remain higher than that for pulmonary tuberculosis, where provision is much more complete. Furthermore, 18 of the 40 cases were certified as cases of tubercular meningitis—these had a very short illness as a rule and diagnosis was often in some doubt during life.

## TABLES AND STATISTICS FOR THE YEAR 1927.

Insured cases applying for treatment:—

	Males	Females	Total
1914 . . . . .	730	321	1,051
1915 . . . . .	572	315	887
1916 . . . . .	747	316	1,063
1917 . . . . .	728	359	1,087
1918 . . . . .	642	261	903
1919 . . . . .	630	255	885
1920 . . . . .	645	250	895
1921 . . . . .	615	255	870
1922 . . . . .	543	265	808
1923 . . . . .	539	291	830
1924 . . . . .	597	371	968
1925 . . . . .	610	327	937
1926 . . . . .	562	368	930
1927 . . . . .	555	296	851

Cases of discharged soldiers referred for treatment—221.

Number of patients who had so far recovered that no active signs of disease were found: Insured—199; Uninsured—780.

Contacts examined at their homes and at the Dispensary—677; of these definite signs of tuberculosis were found in 38, and in 188 further observation was required, as they were suspicious cases of tuberculosis.

Grants of food were made in 2,859 instances to 587 families, and 51 grant of clothing were supplied to 40 patients in Hospital and Sanatoria to enable them to derive full benefit from treatment.

Special visits to the number of 11,284 have been paid by the Tuberculosis Nurses, and 1,111 visits by the Clinical Nurse who attends to domiciliary patients requiring surgical dressings and nursing care.

TABLE I.  
NOTIFICATIONS—1927.

Age Periods	NOTIFICATIONS ON FORM A, ETC.										Total Notifications on Form A, etc.	
	Number of Primary Notifications											
0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	Total Primary Notifications	
Pulmonary Males .. .. .. .. ..	..	18	52	41	66	78	127	176	96	20	849	1,118
" Females .. .. .. .. ..	3	18	23	40	72	108	124	99	70	18	589	787
Non-Pulmonary Males .. .. .. .. ..	9	55	58	37	34	20	24	17	11	5	2	373
" Females .. .. .. .. ..	2	41	42	35	26	27	23	11	4	7	3	306
Totals .. .. .. .. ..	14	132	175	153	198	233	298	303	260	126	39	2,584

Age Periods	NOTIFICATIONS ON FORM B										Total Notifications on Form C, ETC.	
	Number of Primary Notifications											
Under 5	5-	10 to 15	Total Primary Notifications									
Pulmonary Males .. .. .. .. ..	..	..	..	..	..	..	..	..	..	..	265	736
" Females .. .. .. .. ..	..	..	..	..	..	..	..	..	..	..	93	442
Non-Pulmonary Males .. .. .. .. ..	..	..	3	2	5	5	6	6	6	6	20	71
" Females .. .. .. .. ..	..	4	1	1	5	5	6	6	6	6	18	45
Totals .. .. .. .. ..	..	..	7	3	10	10	12	12	12	12	396	1,294

## NOTIFICATION OF TUBERCULOSIS.

TABLE 2.

PHTHISIS—NUMBER OF NEW CASES OF PULMONARY TUBERCULOSIS  
NOTIFIED DURING THE YEARS 1900 TO 1927.

Year	Poor-law Cases	Institutions	Private Practitioners	Total
(1) 1900*	578	455	540	1573
1901	625	373	341	1339
1902	667	305	303	1275
1903	556	550	251	1357
1904	512	440	250	1202
1905	527	588	291	1406
1906	565	510	304	1379
1907	634	646	310	1590
(2) 1908	659	498	346	1503
1909	681	542	384	1607
1910	543	760	356	1659
(3) 1911	517	897	423	1837
(4) 1912	488	947	969	2404
(5) 1913	345	717	1350	2412
1914	483	877	1304	2664
1915	279	740	1194	2213
1916	322	817	1410	2549
1917	470	716	1061	2247
1918	268	563	1015	1846
1919	208	538	845	1591
1920	206	629	672	1507
1921	257	632	722	1611
1922	233	567	656	1456
1923	239	546	659	1444
1924	223	555	731	1509
1925	262	496	746	1504
1926	220	422	765	1407
1927	241	441	756	1438
Total .....	11808	16767	18954	47529

\* This table does not include 425 cases notified in 1899.

- (1). Voluntary notification of Pulmonary Tuberculosis—Manchester scheme.
- (2). Compulsory notification (Tuberculosis Regulations) from Poor Law institutions.
- (3). Compulsory notification from voluntary institutions.
- (4). Compulsory notification of Pulmonary Tuberculosis by all practitioners.
- (5). Compulsory notification of all forms of Tuberculosis.

TABLE 3.

NEW CASES OF NON-PULMONARY TUBERCULOSIS NOTIFIED DURING THE YEARS 1913-1927, THE ORDER OF THE LOCAL GOVERNMENT BOARD TAKING EFFECT IN FEBRUARY, 1913. (MALES AND FEMALES.)

Year	Total	
	Males	Females
1913 .. . . . .	759	714
1914 .. . . . .	519	413
1915 .. . . . .	422	415
1916 .. . . . .	418	467
1917 .. . . . .	433	449
1918 .. . . . .	345	353
1919 .. . . . .	206	228
1920 .. . . . .	280	257
1921 .. . . . .	295	281
1922 .. . . . .	321	284
1923 .. . . . .	350	380
1924 .. . . . .	316	307
1925 .. . . . .	322	300
1926 .. . . . .	239	224
1927 .. . . . .	277	226
Total .. . . .	5,502	5,298

TABLE 4.  
PRIMARY NOTIFICATIONS AND DEATHS FROM PULMONARY TUBERCULOSIS, 1917-1927.

Pulmonary Tuberculosis							TOTAL					
	0-	1-	5-	10-	15-	20-	35-	45-	55-	65-	Notifications	Deaths
Notifications, 1917 ..	12	65	152	166	194	110	185	410	189	432	335	181
Deaths, ..	..	4	20	42	110	109	273	273	237	121	104	71
Notifications, 1918 ..	1	3	46	106	115	200	177	373	197	352	278	136
Deaths, ..	..	..	19	16	41	100	84	237	230	230	129	54
Notifications, 1919 ..	2	2	44	118	120	169	154	280	92	214	214	112
Deaths, ..	..	..	14	19	26	88	92	162	212	195	100	41
Notifications, 1920 ..	3	4	22	98	96	142	154	279	74	152	300	231
Deaths, ..	..	..	3	3	6	27	73	152	205	205	201	107
Notifications, 1921 ..	10	4	39	104	99	137	168	102	102	302	263	113
Deaths, ..	..	..	7	16	18	110	110	160	160	232	200	83
Notifications, 1922 ..	6	5	38	107	92	138	148	117	117	293	216	91
Deaths, ..	..	..	7	15	14	74	74	191	191	202	185	91
Notifications, 1923 ..	3	23	103	84	159	160	294	273	181	207	106	32
Deaths, ..	..	..	12	8	18	96	117	190	193	193	82	31
Notifications, 1924 ..	2	3	30	81	90	174	175	297	298	237	188	97
Deaths, ..	..	..	8	4	13	91	97	168	218	218	186	86
Notifications, 1925 ..	7	41	70	97	152	109	178	279	97	269	254	122
Deaths, ..	..	..	13	8	14	109	97	179	179	193	234	105
Notifications, 1926 ..	14	6	39	43	68	165	188	282	171	254	217	104
Deaths, ..	..	..	21	6	9	66	106	200	200	186	186	99
Notifications, 1927 ..	3	36	75	81	138	186	110	251	157	275	245	114
Deaths, ..	..	..	15	9	14	83	83	157	157	159	198	101
Total notifications ..	63	40	423	156	1057	110	1108	236	1768	1000	1873	1007
Total deaths ..	..	..	3	3	36	15	9	14	138	110	3350	1907

2,236  
1,196  
1,838  
1,103  
1,590  
951  
1,470  
868  
1,598  
967  
1,456  
947  
1,444  
931  
1,509  
906  
1,504  
997  
1,407  
905  
1,438  
881  
10,652

TABLE 4—*continued*  
PRIMARY NOTIFICATIONS AND DEATHS FROM NON-PULMONARY TUBERCULOSIS, 1917-1927.

Non-Pulmonary Tuberculosis	Notifications						Deaths			Notifications Deaths	TOTAL	
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	
Notifications, 1917 ..	32	49	186	111	172	50	169	42	103	27	49	14
Deaths, " ..											62	25
Notifications, 1918 ..	13	23	141	86	152	35	125	37	89	29	46	15
Deaths, " ..											42	12
Notifications, 1919 ..	23	24	75	66	86	27	74	34	63	22	21	16
Deaths, " ..											31	12
Notifications, 1920 ..	19	22	74	107	62	27	92	27	73	20	34	10
Deaths, " ..											40	16
Notifications, 1921 ..	16	20	91	61	129	33	97	..	69	36	40	15
Deaths, " ..											43	20
Notifications, 1922 ..	13	28	134	85	132	31	112	23	77	18	40	12
Deaths, " ..											33	8
Notifications, 1923 ..	18	26	124	55	163	23	136	20	86	24	58	17
Deaths, " ..											49	11
Notifications, 1924 ..	20	24	127	82	128	17	102	23	91	27	49	18
Deaths, " ..											49	13
Notifications, 1925 ..	13	16	129	55	139	22	113	13	79	16	37	12
Deaths, " ..											44	12
Notifications, 1926 ..	17	15	86	45	82	20	81	18	63	16	38	15
Deaths, " ..											23	13
Notifications, 1927 ..	11	9	96	47	107	19	75	14	60	19	47	15
Deaths, " ..											28	8
Total notifications ..	195	256	1263	755	1397	304	1176	282	853	254	459	156
Total deaths ..											478	164
											305	135
											231	131
											145	80
											92	58
											6,594	2,575

TABLE 5.  
SOURCES OF NOTIFICATION OF TUBERCULOSIS DURING 1927.

Source	Pulmonary	Non-Pulmonary	Totals
Crescent Road Institution . . .	81	14	95
Withington Hospital . . .	110	11	121
Booth Hall . . . . .	46	58	104
Outside Poor Law . . . . .	4	..	4
Manchester Royal Infirmary . . .	41	106	147
Ancoats Hospital . . . . .	34	47	81
Skin Hospital . . . . .	..	37	37
St. Mary's Hospital . . . . .	6	17	23
Northern Hospital . . . . .	5	7	12
Jewish Hospital . . . . .	8	1	9
Pendlebury Hospital . . . . .	10	5	15
Babies' Hospital . . . . .	3	2	5
Hulme Dispensary . . . . .	..	..	..
Gartside Street Dispensary . . .	7	34	41
Hardman Street Dispensary . . .	178	9	187
Bowdon Hospital . . . . .	1	..	1
Asylums . . . . .	4	1	5
Schools . . . . .	..	10	10
Tuberculosis Staff . . . . .	93	11	104
Military . . . . .	4	1	5
Various Sources . . . . .	47	19	66
Private Practitioners . . . . .	756	113	869
Total . . . . .	1,438	503	1,941

387 tenants have allowed the removal of bedding, etc., for disinfection; or have themselves burned it in a few instances.

81,522 cardboard boxes have been prepared in the office and supplied to patients for spitting purposes in the home.

693 spit bottles have been supplied for use outside the house.

14,114 visits have been made by the Enquiry Officers during the year.

40,063 letters were sent out.

1,103 notices warning against spitting on floors, etc., have been supplied to offices and workshops.



The Public Health Work is summarised in the following Table and Statement :—

TABLE 7.—STATISTICS RELATING TO THE NOTIFICATION OF TUBERCULOSIS.

	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1901 to 1913	1899 Sept 1st to Dec. 31st, 1900	Total
<i>Cases Visited and Registered—</i>																	
Males .. .	1173	1100	1232	1204	1277	1324	1285	1371	1288	1572	1904	2010	1930	2191	13153 8122	1017 732	35031 24728
Females .. .	866	872	937	1032	1023	1024	928	974	1124	1397	1613	1575	1586	1586			
Totals .. .	2039	1972	2169	2236	2300	2348	2213	2294	2262	2696	3301	3623	3505	3777	21275	1749	59759
<i>Houses Disinfected—</i>																	
1. By Corporation—																	
(a) With solution of chlorinated lime only .. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	24597
(b) With lime solution only .. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	126
(c) *By Esmarch's method and solution of chlorinated lime .. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	29875
(d) †By fumigating lamp .. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	3846
Totals .. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	58444
2. By Tenants—																	
*Esmarch's method or chlorinated lime, etc. .. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	108730
Totals .. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	167174
<i>Specimens of Sputum examined—</i>																	
Positive .. .	348	347	325	391	558	528	437	305	401	465	721	781	1052	1601	104	13893	
Negative .. .	1573	1363	1415	1419	1753	1946	1585	1729	1342	1081	1471	1720	1576	2269	154	34418	
Totals .. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	.. .	48316
Cases reported as sent to Hospital .. .	2062	1844	2027	1942	2052	2139	2153	2035	2315	2400	2078	1719	2357	3321	18623	258	52230
Notified from Common Lodging-houses	56	53	76	65	84	80	102	115	80	117	143	172	212	283	2922	187	4747
Number of cases under observation ..	10586	10379	9949	9561	9258	8606	7990	7318	6511	6898	6327	5690	5941	33102	about 600		

The fate of patients treated in the Crossley Sanatorium and Baguley Sanatorium during the last ten years is set forth in the following tables. Baguley Sanatorium is in the main an institution for advanced cases.

In addition to these, however, cases for observation are sent, and these may, if suitable, be transferred later to the other sanatoria at Delamere and Abergale.

The earlier the stage of the disease at which a patient can be given sanatorium treatment the greater the prospect of permanent arrest. Properly selected cases have their best chance of arrest in the shortest time by intelligently carried out sanatorium treatment; moreover, they learn restraint, discipline, and an ordered way of life, which are essential for maintenance of health and to prevent relapses.

TABLE 8.  
CROSSLEY SANATORIUM.  
*Males.*

Year	No. of new cases	No. of re-admissions	Died in the Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1927
1918 . . .	98	18	..	38	16	44
1919 . . .	114	24	..	50	13	51
1920 . . .	105	22	1	35	25	44
1921 . . .	124	26	2	55	19	48
1922 . . .	115	28	2	51	21	41
1923 . . .	125	29	1	56	18	50
1924 . . .	114	32	2	41	15	56
1925 . . .	131	25	3	40	16	72
1926 . . .	107	44	..	23	5	79
1927 . . .	112	39	..	9	4	99
Total . . .	1,145	287	11	398	152	584

TABLE 8—*continued.*  
 CROSSLEY SANATORIUM—*continued.*  
*Females.*

Year	No. of new cases	No. of re-admissions	Died in the Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1927
1918 .. .	61	9	..	23	11	27
1919 .. .	62	5	..	22	19	21
1920 .. .	56	8	..	16	17	23
1921 .. .	91	12	..	39	16	36
1922 .. .	92	13	..	40	13	39
1923 .. .	121	24	1	51	14	55
1924 .. .	135	25	..	49	23	63
1925 .. .	111	33	1	31	15	64
1926 .. .	127	32	..	25	12	90
1927 .. .	140	24	..	3	4	133
Total .. .	996	185	2	299	144	551

TABLE 9.  
BAGULEY SANATORIUM.  
*Males.*

Year	No. of new cases	No. of re-admissions	Died in Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1927
1918 . . .	390	68	96	166	41	87
1919 . . .	445	225	88	184	63	110
1920 . . .	475	212	116	180	50	129
1921 . . .	349	196	101	147	35	66
1922 . . .	356	166	127	148	26	55
1923 . . .	365	151	115	138	37	75
1924 . . .	363	106	113	147	16	87
1925 . . .	326	88	113	92	24	97
1926 . . .	297	78	85	57	13	142
1927 . . .	307	84	62	27	7	211
Total . . .	3,673	1,374	1,016	1,286	312	1,059

*Females.*

Year	No. of new cases	No. of re-admissions	Died in Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1927
1918 . . .	226	44	72	85	24	45
1919 . . .	196	30	59	83	18	36
1920 . . .	166	48	53	65	19	29
1921 . . .	164	55	54	78	13	19
1922 . . .	198	50	66	75	15	42
1923 . . .	188	38	65	75	16	32
1924 . . .	225	48	63	96	14	52
1925 . . .	199	35	66	59	20	54
1926 . . .	216	48	64	49	17	86
1927 . . .	185	50	36	22	7	120
Total . . .	1,963	446	598	687	163	515

The following tables are to be read in conjunction with the tables showing the amount of assistance given in other recent years. They indicate a continuance of distress :—

The number of cases of Tuberculosis in which the income of the individual or family showed varying amounts of deficit under an assumed standard of living, and the number in which assistance was given to the individual or the family, or both, is shown in the following tables:—

TABLE IO.

TABLE SHOWING PARTICULARS OF DISTRESS IN CASES OF TUBERCULOSIS NOTIFIED DURING THE YEAR 1927. CLASSIFIED ACCORDING TO THE REQUIREMENTS OF THE FAMILY IN EXCESS OF THE INCOME. FOOD, CALCULATED ON THE ATWATER SCALE; HOUSEHOLD SUNDRIES ON MR. ROWNTREE'S SCALE. TAKING THE UNITS OF FOOD AND HOUSEHOLD SUNDRIES USED IN 1913 AS STANDARDS, VARIOUS AMOUNTS HAVE BEEN USED. IN 1922 THE AMOUNT ADDED WAS 125 PER CENT., REDUCED LATER TO 100, AND THEN TO 90 PER CENT. THROUGHOUT 1927 THE AMOUNT ADDED WAS 90 PER CENT.

Conditions affecting Individual Cases	Shortage up to—in Shillings.							Total Short-ages
	—5/-	—10/-	—11/-	—12/-	—13/-	—14/-	—15/-	
Living December 31st, 1927 ..	51	27	1	5	3	2	2	102
Dead December 31st, 1927 ..	20	8	4	1	1	1	..	44
Relief from Guardians .. ..	32	14	3	2	2	1	1	60
Assistance from the £2,750 Grant (Family)	26	13	1	4	1	2	2	52
Assistance from the £1,500 Grant (Individual)	18	6	1	..	..	..	..	26

TABLE II.  
Non-PULMONARY CASES.

Conditions affecting Individual Cases	Shortage up to—in Shillings.						Total Short-ages
	—5/-	—10/-	—11/-	—12/-	—13/-	—14/-	
Living December 31st, 1927 ..	14	12	..	1	1	..	16
Dead December 31st, 1927 ..	3	2	..	..	..	..	19
Relief from Guardians .. ..	8	7	..	..	..	..	16
Assistance from £2,750 Grant ..	9	7	..	1	1	..	20
Assistance from £1,500 Grant ..	3	4	..	..	..	..	8

With reference to Tables IO and II it should be noted that Corporation assistance can only be given in cases which do not fall into the category of destitution.

TABLE 12.  
SOURCES OF PRIMARY NOTIFICATION OF NON-PULMONARY CASES FOR THE  
YEARS 1918 TO 1927.

Source	1918	1919	1920	1921	1922	1923	1924	1925	1926
Crumpsall Hospital .. . .	49	22	15	15	11	21	34	24	13
Withington Hospital .. . .	..	..	11	29	39	33	29	22	20
Booth Hall Infirmary .. . .	45	33	43	60	35	38	47	67	52
Outside Poor Law .. . .	2	1	..	..	..	..	2	..	..
Royal Infirmary .. . . .	111	58	95	95	69	125	99	99	80
Ancoats Hospital .. . . .	57	34	31	27	45	76	76	57	50
Skin Hospital .. . . .	35	32	46	66	37	48	41	37	38
St. Mary's Hospital .. . .	25	2	4	..	21	21	15	14	7
Northern Hospital .. . .	1	1	9	4	17	30	5	15	7
Jewish Hospital .. . . .	1	19	11	1	1	1	5	10	7
Pendlebury Hospital .. . .	8	5	2	3	4	8	8	16	10
Babies' Hospital .. . . .	..	..	..	..	..	..	..	..	6
Hulme Dispensary .. . .	1	..	..	..	..	..	..	..	2
Gartside Street Dispensary ..	66	19	25	63	36	71	41	61	33
Hardman Street Dispensary ..	15	9	23	23	33	21	11	7	8
Bowdon Hospital .. . . .	..	..	2	..	..	3	1	..	..
Asylums .. . . . .	6	2	8	7	2	..	2	1	1
Schools .. . . . .	5	3	37	31	38	34	23	26	11
Tuberculosis Office Staff ..	6	16	16	7	13	20	19	9	6
Army .. . . . .	14	2	..	1	3	7	1	2	2
Various Sources .. . . .	17	8	11	13	21	20	14	29	9
Private Practitioners .. . .	234	168	148	131	180	152	150	126	101
	698	434	537	576	605	730	623	622	463

TABLE 13.

PRIMARY NOTIFICATIONS OF PULMONARY AND NON-PULMONARY TUBERCULOSIS  
RECEIVED FROM MUNICIPAL WARDS DURING 1927.

Wards	Pulmonary	Non-Pulmonary	Totals
1. Exchange .. .. .. .. ..	..	1	1
2. New Cross .. .. .. .. ..	112	31	143
3. St. Clement's .. .. .. .. ..	15	11	26
4. Oxford .. .. .. .. ..	6	1	7
5. St. John's .. .. .. .. ..	13	3	16
6. St. Ann's .. .. .. .. ..	..	..	..
7. St. Michael's .. .. .. .. ..	60	25	85
8. Collyhurst .. .. .. .. ..	59	24	83
9. Cheetham .. .. .. .. ..	32	10	42
10. Collegiate Church .. .. .. .. ..	62	12	74
11. Crumpsall .. .. .. .. ..	19	3	22
12. Blackley .. .. .. .. ..	28	11	39
13. Harpurhey .. .. .. .. ..	41	16	57
14. Moston .. .. .. .. ..	15	12	27
15. Newton Heath .. .. .. .. ..	21	15	36
16. Miles Platting .. .. .. .. ..	50	23	73
17. Bradford .. .. .. .. ..	53	20	73
18. Beswick .. .. .. .. ..	64	17	81
19. Ardwick .. .. .. .. ..	73	20	93
20. Openshaw .. .. .. .. ..	67	17	84
21. St. Mark's .. .. .. .. ..	65	29	94
22. Longsight .. .. .. .. ..	30	14	44
23. All Saints' .. .. .. .. ..	58	20	78
24. St. Luke's .. .. .. .. ..	55	18	73
25. Medlock Street .. .. .. .. ..	82	19	101
26. St. George's .. .. .. .. ..	55	30	85
27. Moss Side East .. .. .. .. ..	43	11	54
28. Moss Side West .. .. .. .. ..	37	10	47
29. Chorlton-cum-Hardy .. .. .. .. ..	42	14	56
30. Didsbury .. .. .. .. ..	15	11	26
31. Withington .. .. .. .. ..	31	10	41
32. Gorton North .. .. .. .. ..	45	8	53
33. Gorton South .. .. .. .. ..	49	14	63
34. Levenshulme .. .. .. .. ..	23	15	38
35. Rusholme .. .. .. .. ..	18	8	26
Total—City of Manchester ..	1,438	503	1,941

TABLE A.—RETURN SHOWING THE WORK OF THE DISPENSARY DURING THE YEAR 1927.

Diagnosis	Pulmonary						Non-Pulmonary						Total			
	Adults		Children		Adults		Children		Adults		Children					
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total	
A.—New cases examined during the year (excluding contacts)—																
(a) Definitely tuberculous ..	..	..	..	..	581	383	60	45	99	85	129	104	680	468	189	149
(b) Doubtfully tuberculous ..	..	..	..	..	..	..	..	..	..	..	..	..	90	77	17	23
(c) Non-tuberculous ..	..	..	..	..	..	..	..	..	..	..	..	..	552	546	310	271
B.—Contacts examined during the year—																
(a) Definitely tuberculous ..	..	..	..	..	6	14	7	5	..	..	3	3	6	14	10	8
(b) Doubtfully tuberculous ..	..	..	..	..	..	..	..	..	..	..	..	..	13	12	8	8
(c) Non-tuberculous ..	..	..	..	..	..	..	..	..	..	..	..	..	58	130	203	207
C.—Cases written off the Dispensary Register as—																
(a) Cured ..	..	..	..	..	147	123	126	16	70	84	54	50	217	207	80	66
(b) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error) ..	..	..	..	..	..	..	..	..	..	..	..	..	620	685	521	480
D.—Number of persons on Dispensary Register on December 31st—																
(a) Diagnosis completed ..	..	..	..	..	2,814	1,886	315	309	572	602	519	425	3,386	2,488	834	734
(b) Diagnosis not completed ..	..	..	..	..	..	..	..	..	..	..	..	..	53	41	14	16

TABLE B.—INSURED CASES TREATED IN 1927.

Residential	...	...	...	...	...	...	1,307
Dispensary	...	...	...	...	...	...	62
Domiciliary	...	...	...	...	...	...	2,518
Total	...	...	...	...	...	...	3,887

## ANALYSIS OF CASES TREATED.

TABLE I.—Residential (*Insured*).

INSTITUTION	Total Cases Treated		Discharged from Institutions			*Residential Treatment discontinued in other cases	Still under Residential Treatment on 1st Jan., 1928
	Males	Females	Improved	Without Improvement	Died		
	(1)		(2)	(3)	(4)	(5)	(6)
<i>Pulmonary</i>							
Leeds General Hospital	469	237	189 82	32 40	81 42	.. ..	167 73
Leeds Royal Infirmary	169	152	89 95	40 22	1 ..	4 8	35 27
Leeds General Hospital	130	18	71 10	16 2	.. ..	8 ..	35 6
All Pulmonary	768	407	536	152	124	20	343
<i>Non-Pulmonary</i>							
Leeds Royal Infirmary	24	11	18 10	3 ..	1 1	2 ..	.. ..
Hospital	7	1	6 1	.. ..	.. ..	.. ..	1 ..
Ex-Servicemen's Hospital	6	5	6 5	.. ..	.. ..	.. ..	.. ..
All Non-Pulmonary	37	17	46	3	2	2	1
<b>ALL FORMS</b>	<b>805</b>	<b>424</b>	<b>582</b>	<b>155</b>	<b>126</b>	<b>22</b>	<b>344</b>

The figures in column (5) relate to cases as to the progress of which no definite report is available for various reasons—e.g., the withdrawal from the Institution of the insured persons themselves before the expiration of the period for which they were nominated for the treatment. In addition to the above cases, 89 cases, mostly ex-service men, have been admitted to the East Riding Training Colony, Barrowmore Hall, for treatment and for training.

TABLE II.—Residential (*Uninsured*).

INSTITUTION	Total Cases Treated			Discharged from Institutions		Died	* Residential Treatment discontinued in other cases	Still Residential Treatment
	Males	Females	Children	Improved (2)	Without Improvement (3)			
<i>Pulmonary</i>								
Baguley . . . . .	116			34	24	19	..	
		124		59	9	27	..	
			..	..	..	..	..	
Crossley . . . . .	25			19	4	..	1	
		51		30	7	..	2	
			..	..	..	..	..	
Abergele . . . . .	21			14	1	..	..	
		7	..	1	1	..	1	
Total Pulmonary . . .	162	182	..	157	46	46	4	
<i>Non-Pulmonary</i>								
Abergele . . . . .				..	..	..	..	
			..	..	..	..	..	
			15	4	1	..	..	
Manchester Royal Infirmary . . . . .	5	6		4	..	..	..	
			22	4	..	..	..	
				20	..	1	..	
Skin Hospital . . . . .	1			1	..	..	..	
		6		5	..	..	..	
			8	7	..	..	..	
Ancoats Hospital . . . . .				..	..	..	..	
			..	..	..	..	..	
Total Non-Pulmonary . . . . .	6	12	60	59	1	1	..	
<b>TOTAL—ALL FORMS . . .</b>	<b>168</b>	<b>194</b>	<b>60</b>	<b>216</b>	<b>47</b>	<b>47</b>	<b>4</b>	<b>1</b>

\* The figures in column (5) relate to cases of which no definite report is available for various reasons—e.g., the withdrawal from the Institution of the persons themselves before the expiration of the period for which they were nominated for the treatment.

Under the Corporation scheme patients suffering from surgical tuberculosis have received treatment at the Manchester Royal Infirmary and Ancoats Hospital, and cases of tuberculosis of the skin have been treated at the Skin Hospital.

The types of case are summarised below.

Bones and Joints.. . . . .	26
Glands .. . . . .	41
Genito-Urinary Tract .. . . .	12
Pharynx.. . . . .	1
Abdomen .. . . . .	13
Lupus Vulgaris .. . . . .	198
Toxi-Tuberculids .. . . . .	3
Bazins Disease .. . . . .	3
Tuberculous Ulceration of Skin.	22

## TABLES SHOWING AFTER HISTORY OF ARRESTED CASES (INSURED).

1913.

No Tubercl Bacilli Found.

Tubercl Bacilli Found.

Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1927	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1927	Lost sight of	Died
I.	M	I	I	..	..	M	..	..	..	..
	F	5	3	2	..	F	..	..	..	..
II.	M	2	..	I	I	M	I	I	..	..
	F	..	..	..	..	F	..	..	..	..
III.	M	..	..	..	..	M	..	..	..	..
	F	..	..	..	..	F	..	..	..	..
	M & F	8	4	3	I	M & F	I	I	..	..

1914.

I.	M	14	5	4	5	M	4	2	I	I
II.	F	13	7	4	2	F	2	I	I	..
	M	3	2	I	..	M	3	I	..	2
III.	F	2	I	I	..	F	..	..	..	..
	M	2	..	I	I	M	I	..	I	..
	M & F	34	15	11	8	M & F	11	4	3	4

1915.

I.	M	20	8	8	4	M	14	5	I	8
II.	F	19	9	5	5	F	3	2	..	I
	M	16	8	5	3	M	2	..	..	2
III.	F	6	5	I	..	F	2	2	..	..
	M	I	I	..	..	M	4	2	..	2
	M & F	63	32	19	12	M & F	25	11	I	13

1916.

I.	M	16	9	3	4	M	10	6	..	4
II.	F	15	7	8	..	F	2	..	2	..
	M	4	3	..	I	M	6	2	2	2
III.	F	7	5	I	I	F	..	..	..	..
	M	I	I	..	..	M	I	..	..	I
	M & F	44	25	13	6	M & F	20	8	4	8

## TABLES SHOWING AFTER HISTORY OF ARRESTED CASES (INSURED)—continued

1917.

*No Tercle Bacilli found.**Tercle Bacilli found.*

Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1927	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1927	Lost sight of	Died
I.	M	19	16	2	1	M	9	4	3	2
	F	11	7	2	2					
II.	M	14	8	1	5	M	4	1	..	3
	F	7	6	1	..					
III.	M	2	1	1	..	M	3	..	1	2
	F	..	..	..	..					
	M & F	53	38	7	8	M & F	20	6	5	9

1918.

I.	M	18	9	6	3	M	6	3	1	2
II.	F	15	10	1	4	F	5	4	..	1
	M	13	9	1	3					
III.	F	5	3	1	1	M	7	5	..	2
	M	3	3	..	..					
	F	1	1	..	..	F	2	2	..	..
	M & F	55	35	9	11	M & F	21	15	1	5

1919.

I.	M	26	21	4	1	M	7	5	..	2
II.	F	10	7	3	..	F	3	3	..	..
	M	14	8	3	3					
III.	F	11	8	2	1	M	12	7	2	3
	M	4	2	1	1					
	F	1	1	..	..	F	10	7	2	1
	M & F	66	47	13	6	M & F	36	24	5	7

1920.

I.	M	22	17	..	5	M	14	7	3	4
II.	F	7	4	2	1	F	4	1	3	..
	M	20	12	5	3					
III.	F	7	4	2	1	M	7	3	2	4
	M	2	..	..	2					
	F	1	1	..	..	F	2	2	..	..
	M & F	59	38	9	12	M & F	32	17	7	8

## TABLES SHOWING AFTER HISTORY OF ARRESTED CASES (INSURED)—continued

1921.

*No Tuberclle Bacilli found.**Tuberclle Bacilli found.*

Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1927	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1927	Lost sight of	Died
I.	M	28	21	4	3	M	15	12	1	2
	F	19	12	7	..					
II.	M	17	9	3	5	M	17	12	3	2
	F	7	5	1	1					
III.	M	4	2	..	2	M	1	..	..	1
	F	3	3	..	..					
		M & F	78	52	15	M & F	39	29	5	5

1922.

I.	M	40	27	7	6	M	13	11	..	2
II.	F	19	15	3	1	F	4	4	..	..
	M	18	15	..	3					
III.	F	12	9	2	1	M	22	14	4	4
	M	9	9	..	..					
		M & F	102	77	13	M & F	51	37	8	6

1923.

I.	M	19	14	3	2	M	19	12	4	3
II.	F	17	15	2	..	F	2	2	..	..
	M	20	14	4	2					
III.	F	5	5	..	..	M	3	3	1	1
	M	3	3	..	..					
		M & F	65	52	9	M & F	36	23	6	7

## TABLES SHOWING AFTER HISTORY OF ARRESTED CASES (INSURED)—continued

1924.

*No Tuberclle Bacilli found.**Tuberclle Bacilli found.*

Stage	Sex	Number of cases taken off Register	Number known to be still living at end of 1927	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1927	Lost sight of	Died
I.	M	59	44	10	5	M	16	13	2	1
	F	22	17	2	3		3	3	..	..
II.	M	35	31	1	3	M	18	15	2	1
	F	20	18	1	1		2	2	..	..
III.	M	13	8	1	4	M	8	6	1	1
	F	9	7	2	..		2	2	..	..
	M & F	158	125	17	16	M & F	49	41	5	3

1925.

I.	M	31	30	1	..	M	18	14	3	1
II.	F	18	17	1	..	F	6	5	..	1
	M	30	25	5	..	M	15	12	1	2
III.	F	10	7	3	..	F	8	8	..	..
	M	7	7	..	..	M	4	3	..	1
	F	3	2	1	..	F	2	2	..	..
	M & F	99	88	11	..	M & F	53	44	4	5

1926.

I.	M	25	23	2	..	M	15	12	3	..
II.	F	20	18	2	..	F	4	4	..	..
	M	21	21	..	..	M	6	6	..	..
III.	F	5	5	..	..	F	2	2	..	..
	M	9	8	..	1	M	5	5	..	..
	F	2	2	..	..	F	..	..	..	..
	M & F	82	77	4	1	M & F	32	29	3	..

D. P. SUTHERLAND.

## BAGULEY SANATORIUM.

REPORT FOR THE YEAR 1927.

By DR. H. G. TRAYER, MEDICAL SUPERINTENDENT.

The number of available beds was 333.

The number of patients admitted was 642, the daily average number of beds occupied being 326·14.

The table below gives the number of patients in hospital each month in the years 1923, 1924, 1925, 1926, and 1927:—

	1923	1924	1925	1926	1927
January . . . . .	304	319	300	318	325
February . . . . .	310	314	310	321	328
March . . . . .	311	317	319	321	328
April . . . . .	311	310	325	322	326
May . . . . .	322	317	325	332	325
June . . . . .	326	319	325	325	321
July . . . . .	324	317	332	326	326
August . . . . .	331	309	329	326	326
September . . . . .	324	310	316	325	327
October . . . . .	326	310	326	327	327
November . . . . .	323	309	322	327	328
December . . . . .	300	296	318	325	325

From April, 1924, until February, 1925, the number of available beds was 327, owing to the relaying of the floor in one of the wards.

On December 31st, 1927, there were 89 patients who had been in the institution for a longer period than one year, as follows:—

Patients in hospital for 1-2 years	..	..	..	..	..	..	50
" "	2-3	"	..	..	..	..	18
" "	3-4	"	..	..	..	..	9
" "	4-5	"	..	..	..	..	5
" "	over 5	"	..	..	..	..	7

Number of patients in hospital, January 1st .. .. .. ..	316
,,     ,, admitted during the year .. .. .. ..	642
,,     ,, discharged    ,,     ,, .. .. ..	473
,,     ,, who died    ,,     ,, .. .. ..	170
Total number of patients treated    ,,     ,, .. .. ..	958
Patients remaining in hospital, December 31st .. .. .. ..	315

The average length of stay of patients discharged during the period :—

Males .. .. .. .. ..	145·85 days.
Females .. .. .. .. ..	163·12   ,,

Cases admitted from the districts of the Bucklow Joint Hospital Board are included in the above totals. The details of these cases are :—

On January 1st, 1927, there were 5 patients in the Sanatorium ; 7 patients were admitted during the period, 4 patients were discharged, and 1 died ; 7 patients remained in the hospital on December 31st.

#### *Pathological Laboratory Report :—*

Number of specimens of sputum examined :—

Number of examinations .. .. .. .. ..	2,485
Positive .. .. .. .. .. .. ..	969
Negative .. .. .. .. .. .. ..	1,516

Other examinations :—

Special examination of urine .. .. .. ..	72
Pleural effusion .. .. .. .. .. ..	10
Cerebro-spinal fluid .. .. .. .. .. ..	2
Pus .. .. .. .. .. .. ..	4

(In the examinations tubercle bacilli were found in the following :—Urine 3, pleural effusion 2, pus 2.)

A large number of Wassermann's reactions were carried out by the Public Health Laboratory.

#### *X-Ray Report.*

Number of patients screened .. .. .. .. .. .. 780

#### *Dental Report.*

Patients seen .. .. .. .. .. .. .. .. .. ..	381
Fillings .. .. .. .. .. .. .. .. .. ..	17
Extractions .. .. .. .. .. .. .. .. .. ..	323
Dentures .. .. .. .. .. .. .. .. .. ..	7
Repairs and adjustments to dentures .. .. .. ..	18
Scaling .. .. .. .. .. .. .. .. .. ..	6

In addition, the Dentist has paid numerous visits to the wards for the purpose of examining the mouths of bed patients.

RETURN SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF PATIENTS SUFFERING FROM PULMONARY TUBERCULOSIS AND OF OBSERVATION OF DOUBTFUL CASES DURING THE YEAR 1927.

RETURN SHOWING THE IMMEDIATE RESULTS OF TREATMENT—*continued*

Classification mission	Age at Discharge	Condition on Discharge	Duration of Stay								Positive Sputum on Admission— Negative on Discharge	
			Under 3 months		3—6 months		6—12 months		More than 12 months			
			M.	F.	M.	F.	M.	F.	M.	F.		
T.B. LUS, UP II.	Ages 15—24	Improved ..	9	11	3	10	7	6	2	8	56	16
		Stationary ..	4	1	..	4	..	1	..	..	10	
		Worse ..	..	..	2	1	..	1	..	1	..	5
		Died ..	..	..	3	2	..	1	2	1	12	
	Ages 25—34	Improved ..	13	6	7	6	5	1	3	4	45	15
		Stationary ..	1	3	..	1	..	..	..	4	9	
		Worse ..	..	..	..	..	1	1	..	..	2	
		Died ..	..	..	1	1	2	..	2	2	10	
	Ages 35—44	Improved ..	15	10	12	6	11	1	6	3	64	23
		Stationary ..	4	1	1	..	..	1	..	..	7	
		Worse ..	..	..	1	..	1	1	..	..	4	
		Died ..	..	..	5	1	1	1	..	..	9	
	Ages 45 and over	Improved ..	18	5	14	1	9	1	7	1	56	12
		Stationary ..	7	..	1	1	1	..	1	..	11	
		Worse ..	..	..	..	..	2	..	..	..	2	
		Died ..	..	..	2	1	1	..	1	1	13	
T.B. L.S., III.	Ages 15—24	Improved ..	..	1	..	4	..	1	..	1	7	2
		Stationary ..	..	4	..	..	..	1	..	..	5	
		Worse ..	..	1	3	..	2	..	..	..	6	
		Died ..	..	..	8	6	1	9	4	1	29	
	Ages 25—34	Improved ..	1	1	1	..	1	1	2	..	7	..
		Stationary ..	1	..	..	..	..	..	..	..	1	
		Worse ..	..	2	2	..	..	1	..	..	5	
		Died ..	..	..	11	11	1	2	1	4	31	
	Ages 35—44	Improved ..	..	2	1	2	2	..	..	1	8	2
		Stationary ..	..	3	2	..	..	1	..	..	6	
		Worse ..	..	..	1	..	..	1	..	..	2	
		Died ..	..	..	9	4	2	3	..	2	1	
	Ages 45 and over	Improved ..	..	2	2	2	2	1	3	..	13	2
		Stationary ..	..	4	1	..	..	1	..	..	6	
		Worse ..	..	1	1	1	..	..	..	1	4	
		Died ..	..	..	18	3	5	..	1	..	31	

*Summary of preceding Tables.*

Classification	Condition on Discharge			
	Improved	Stationary	Worse	Died
T.B. Minus . . . .	88	15	2	12
T.B. Plus, Group I . . .	5	..	..	..
T.B. Plus, Group II. . .	221	37	13	44
T.B. Plus, Group III. . .	35	18	17	112
Total . . . .	349	70	32	168

*Observation Cases.*

Age at Discharge	Condition on Discharge	Duration of Stay							
		Under 3 months		3-6 months		6-12 months		More than 12 months	
		M.	F.	M.	F.	M.	F.	M.	F.
Ages 15-24	Improved ..	1	2	1	..	..	..	..	..
	Stationary ..	..	..	..	..	..	..	..	..
	Worse ..	..	..	..	..	..	..	..	..
	Died ..	..	..	..	..	..	..	..	..
Ages 25-34	Improved ..	9	2	1	..	..	..	..	1
	Stationary ..	..	..	..	..	..	..	..	..
	Worse ..	..	..	..	..	..	..	..	..
	Died ..	..	1	..	..	..	..	..	..
Ages 35-44	Improved ..	6	1	..	..	..	..	..	..
	Stationary ..	..	..	..	..	..	..	..	..
	Worse ..	..	..	..	..	..	..	..	..
	Died ..	..	..	..	..	..	..	..	..
Ages 45 and over	Improved ..	5	..	..	1	..	..	..	..
	Stationary ..	2	..	..	..	..	..	..	..
	Worse ..	1	..	..	..	..	..	..	..
	Died ..	1	..	..	..	..	..	..	..

Of the above observation cases 11 were accepted as cases of tuberculosis, 19 were not accepted, and 5 left the institution before completion of diagnosis.

*Complications occurring amongst Fatal Cases during the year.*

Complications	Male	Female
Tuberculosis of bone (other than spine) .. ..	2	..
"    (spine) .. .. .. ..	2	..
"    of the Larynx .. .. .. ..	30	15
Tuberculous adenitis (neck) .. .. .. ..	1	..
"    enteritis .. .. .. ..	5	7
"    kidney .. .. .. ..	2	2
"    meningitis .. .. .. ..	3	1
"    ovary .. .. .. ..	..	1
"    peritonitis .. .. .. ..	3	4
"    spleen .. .. .. ..	..	1
"    suprarenals .. .. .. ..	1	1
"    testicle .. .. .. ..	1	..
Addison's disease .. .. .. ..	..	1
Amyloid liver .. .. .. ..	1	2
Aortic aneurysm .. .. .. ..	1	..
"    stenosis .. .. .. ..	1	1
Atheroma .. .. .. ..	9	1
Ascites .. .. .. ..	1	..
Bronchitis .. .. .. ..	4	..
Carcinoma breast (recurrent) .. .. .. ..	..	1
Cerebral haemorrhage .. .. .. ..	..	1
Chronic parenchymatous nephritis .. .. .. ..	1	1
Cirrhosis liver .. .. .. ..	3	..
Fibrosis of Mitral Valve .. .. .. ..	5	4
Fistula in ano .. .. .. ..	2	..
Gangrene of Lung .. .. .. ..	1	..
Glycosuria .. .. .. ..	1	..
Hæmoptysis .. .. .. ..	3	1
Hydropericardium .. .. .. ..	4	..
Malaria .. .. .. ..	1	..
Mitral stenosis .. .. .. ..	2	..
Pericardial effusion .. .. .. ..	..	1
Pericarditis (adherent) .. .. .. ..	1	1
Pleural effusion :		
Hæmorrhagic .. .. .. ..	1	..
Serous .. .. .. ..	3	2
Rheumatoid arthritis .. .. .. ..	1	..
Spontaneous pneumothorax .. .. .. ..	3	2
Non-pulmonary tuberculosis—		
Carcinoma bronchus .. .. .. ..	1	..
Chronic bronchitis, emphysema and cardiac muscle failure .. .. .. ..	1	..
Scirrhus carcinoma stomach .. .. .. ..	..	1
Total .. .. .. ..	101	52
Uncomplicated cases .. .. .. ..	40	36

Eleven fatal cases were under one week in the hospital.

Sixteen fatal cases were over one week in the hospital, but less than three.

The total number of deaths was 170, made up of 100 males and 70 females, representing a case fatality of 17·74 per cent.

The average length of time in hospital of fatal cases was—

Males .. .. .. ..	192·52
Females .. .. .. ..	165·84

*Autopsies.*

Twenty-nine autopsies were carried out on males and eighteen on females. It is extremely difficult to obtain consent for post mortem examinations.

It is hoped that the findings will be of value when the total number over a period of years is investigated. It is proposed this year to give the following table of the findings in these 47 cases (it is to be noted that these cases are also included in the usual table) :—

Findings	Male	Female
Tuberculosis of bone (other than spine) .. ..	2	..
,,     (spine) .. .. .. ..	2	..
,,     of the larynx .. .. .. ..	II	I
Tuberculous enteritis .. .. .. ..	4	7
,,     kidney .. .. .. ..	2	2
,,     meningitis .. .. .. ..	I	I
,,     ovary .. .. .. ..	..	I
,,     peritonitis .. .. .. ..	I	..
,,     spleen .. .. .. ..	..	I
,,     suprarenals .. .. .. ..	I	I
,,     testicle .. .. .. ..	I	..
Addison's disease .. .. .. ..	..	I
Amyloid liver .. .. .. ..	I	2
Aortic aneurysm .. .. .. ..	I	..
,,     stenosis .. .. .. ..	I	I
Atheroma .. .. .. ..	9	I
Carcinoma breast (recurrent) .. .. .. ..	..	I
Chronic parenchymatous nephritis .. .. .. ..	I	I
Cirrhosis liver .. .. .. ..	3	..
Fibrosis of mitral valve .. .. .. ..	5	4
Gangrene of lung .. .. .. ..	I	..
Hæmoptysis .. .. .. ..	3	I
Hydropericardium .. .. .. ..	4	..
Mitral stenosis .. .. .. ..	2	..
Pericardial effusion .. .. .. ..	..	I
Pericarditis (adherent) .. .. .. ..	I	I
Pleural effusion :		
Hæmorragic .. .. .. ..	I	..
Serous .. .. .. ..	3	..
Rheumatoid arthritis .. .. .. ..	I	..
Spontaneous pneumothorax .. .. .. ..	2	2
Non-pulmonary tuberculosis—		
Carcinoma bronchus .. .. .. ..	I	..
Chronic bronchitis, emphysema and cardiac muscle failure .. .. .. ..	I	..
Scirrhous carcinoma stomach .. .. .. ..	..	I
Total .. .. .. ..	66	31

*Visit of the Minister of Health.*

The Right Hon. Neville Chamberlain, M.P., Minister of Health, paid an official visit of inspection to the Institution, and was particularly interested in the Handicraft Department. He expressed himself satisfied with all he saw, and Mrs. Neville Chamberlain (who accompanied him) remarked on the general happiness of all the patients.

*Patients.*

The average number of occupied beds still stands at a high level.

The reorganisation of the routine was introduced in January. It has proved a success and the details are as follows :—

Time	TABLE "A." BLUE CARD	TABLE "B" YELLOW CARD	TABLE "C" RED CARD
	12 hours and L. W. W.	Grades I., II., III.	Grades IV., V., Workshops, Special Work
a.m. 6-0	Temperatures. Tea	As "A"	As "A"
7-0 to 7-30	Rise. Beds aired	As "A"	As "A"
8-0	Beds to be made	As "A"	As "A"
8-15	Buzzer	Buzzer	Buzzer
8-30	Buzzer	Buzzer	Buzzer
8-30	Breakfast	As "A"	As "A"
9-15 to 9-45	Rest	Tidy wards, etc.	As "B"
9-55	Buzzer	Buzzer	Buzzer
10-0	Light ward work, handicraft, exercise to 11-20—then rest	Graduated exercise, handicraft, to 11-45— then rest	Graduated exercise to 11-45 then rest—
11-40	Buzzer	Buzzer	Buzzer
11-45 to 12-20 p.m.	"A" from 11-20 rest	Rest	Rest
12-30	Buzzer	Buzzer	Buzzer
12-30	Dinner	Dinner	Dinner
1-15 to 1-50	Rest	Rest	Rest
1-55	Buzzer	Buzzer	Buzzer
2-0 to 3-20	Exercise, handicraft	Graduated exercise	Graduated exercise, handicraft, to 3-50
3-20	Buzzer	Buzzer	....
3-20 to 4-0	Rest	As "A"	....
4-0	Buzzer	Buzzer	Buzzer
4-0	Light tea	As "A"	As "A"
5-30	Buzzer	Buzzer	Buzzer
5-30 to 6-15	Rest. Temperatures to be taken	As "A"	As "A"
6-15	Buzzer	Buzzer	Buzzer
6-15	Supper (two courses)	As "A"	As "A"
6-45 to 8-25	Recreation	As "A"	As "A"
8-30	In wards	As "A"	As "A"
9-0	Lights out	Lights out	Lights out

Instruction to the patients has been carried out as in former years.

I feel that a certain volume of health propaganda might be directed towards teaching the general public that the consumptive who has been trained to observe the simple rules of preventing the spread of infection is not a social danger. Under existing conditions the unfortunate consumptive, even when convalescent, receives scant consideration, and certainly is not encouraged to carry out the precepts that he or she knows is essential for the good of both themselves and the community.

#### *Special Methods of Treatment.*

A trial of the effect of intravenous injections of calcium chloride in advanced pulmonary tuberculosis has been commenced, but it is too soon to make any comment.

#### *Occupational Treatment.*

A complete scheme of handicraft for male patients was introduced early in the year under a full-time instructor, Mr. E. J. Chawner. The scheme is now fully established as an integral part of the routine of the Sanatorium, and it is hoped to extend its activities so that provision can be made for female patients. The daily average attendance of patients has risen from thirty-six to fifty per diem, and the number of patients' hours worked per day is seventy.

Mr. A. H. Jenkins, Chief Inspector of Handwork under the Manchester Education Committee, gave invaluable help and advice in the preliminary stages, and is now permitted by his Committee to pay periodical visits of inspection. An extract of his report on the scheme is as follows :—

“ Considering the varied degrees of ability, and the time devoted to the work, the results are very satisfactory. At all my visits the men seemed to have been keenly interested in the work and were enjoying it.”

#### *Extensions and Improvements.*

Farming operations were discontinued early in the year, sufficient land being retained to grow potatoes and vegetables. The Superintendent of the Manchester Parks acts as advisor to the Medical Superintendent in all gardenin operations, and this is proving a most satisfactory arrangement.

The piggeries have been placed in charge of the Veterinary Officer, and are no longer under the control of the Medical Superintendent.

Waiting rooms have been provided for the X-ray Department and the Dental Department.

An economiser plant has been installed in the boiler house.

The reorganisation of the sewage system is now completed, and a satisfactory effluent has been obtained.

An internal automatic telephone system has been installed which has proved efficient in its working and of the greatest assistance to the staff.

The carpentry section erected a pavilion for the bowling green.

The stage in the Dining Hall has now been equipped with a back scene side wings, and an appropriately decorated proscenium, the whole of the work having been carried out by one of the patients.

A scheme of decoration has been carried out in the patients' Dining Hall that has turned this formerly barn-like structure into a very handsome hall.

*Recreation.*

This important side of the life here has been fully maintained. Our thanks are once again due to Messrs. Gaumont for their weekly supply of films; unfortunately the amalgamation of Messrs. Pathé Frères with another firm has prevented them treating us as generously as formerly.

The weekly entertainments during the winter months are enjoyed by both patients and staff.

The Christmas entertainments organised by both the nursing and domestic staff are now eagerly looked forward to as annual treats.

On behalf of the patients and staff a very sincere expression of thanks is accorded to the many amateur and professional entertainers who so freely give their services, particularly Messrs. J. Wadsworth and Hamilton Harris, Lieut. W. L. Dunn, and the Reynolds Pantomime Company (through the kindness of Mr. Haytor.)

Despite the weather conditions the bowling season was a great success. It is felt that an expression of gratitude should be extended to all the teams who visited us, not only for the matches they provide but also for the very handsome donations they present for the patients' recreation fund.

The afternoon band concerts are probably the most popular form of entertainment provided.

It appears fitting to terminate this report with an expression of my personal appreciation for the loyal and willing manner in which the staff have discharged their duties.

H. G. TRAYER.

The tables attached show the present condition of patients tested with tuberculin in the years 1919 to 1923. In each case the after-history column has been very kindly completed by the Senior Tuberculosis Officer.

Tested 1919	Condition, January, 1928
No reaction to tuberculin .. .. 10	No evidence of active tuberculosis.. 2 Not traced.. .. .. .. .. 6 Active pulmonary tuberculosis .. 2
Doubtful reaction.. .. .. .. 1	Dead .. .. .. .. .. .. .. 1
Very doubtful reaction .. .. 1	Probably non-tubercular silicosis .. 1
Positive reaction .. .. .. .. 3	Quiescent .. .. .. .. .. .. 1 With signs not active .. .. .. 1 Dead .. .. .. .. .. .. 1

Tested 1920	Condition, January, 1928
No reaction to tuberculin .. .. 11	No evidence of active tuberculosis.. 5 Dead .. .. .. .. .. 1 Dead (active tuberculosis) .. .. 1 Not traced .. .. .. .. 4
Doubtful reaction.. .. .. .. 1	Not active tuberculosis .. .. .. 1
Positive reaction .. .. .. .. 1	Not traced .. .. .. .. 1
Tested 1921	Condition, January, 1928
No reaction to tuberculin .. .. 5	No evidence of active tuberculosis.. 1 Dead .. .. .. .. .. 2 Not traced .. .. .. .. 2
Doubtful reaction .. .. .. .. 2	Not traced .. .. .. .. 1 Dead .. .. .. .. .. 1
Tested 1922	Condition, January, 1928
No reaction to tuberculin .. .. 10	No evidence of active tuberculosis.. 2 Active pulmonary tuberculosis .. 1 Dead .. .. .. .. .. 5 Not traced .. .. .. .. 2
Doubtful reaction.. .. .. .. 3	No evidence of active tuberculosis.. 1 Probably tuberculosis .. .. .. 1 Dead .. .. .. .. .. 1
Tested 1923	Condition, January, 1928
No reaction to tuberculin .. .. 2	No evidence of active tuberculosis.. 1 Probably not active tuberculosis .. 1
Positive reaction .. .. .. .. 1	Probably active tuberculosis .. .. 1

	1.	Impaired percussion note right apex. Inspiratory crepitations	Faint	None	Negative	No evidence of active tubercle	1. Sputum contained tubercle bacilli, 1-27. Left the district.
Age 26	2.	Impaired percussion note right apex. Prolonged expiratory murmur	.001 .005 .01 .01	None	Negative	No evidence of active tubercle	2. Lost sight of.
Age 24	3.	Impaired percussion note right apex.....	.001 .005 .01 .01	None	Negative	No evidence of active tubercle	3. No active signs. Full work.
Age 19	4.	Impaired percussion note over both apices. Prolonged expiratory murmur over right upper lobe	.001 .005 .01 .01	None	Negative	No evidence of active tubercle	4. In Australia.
Age 18	5.	Impaired percussion note over right apex. Breath sounds weak in right upper lobe. Defective basal expansion, mitral stenosis	.001 .005 .01 .01	Nov., Dec., 1919 1919	Nov., None	No evidence of active tubercle	5. Readmitted to Sanatorium.
Age 39	6.	Slight impairment of percussion note at the left base. Prolonged expiration left base	.001 .005 .003 .005	June, 1919 May, 1919	Sputum suspicious	Tuberculous pleurisy right base ? L	6. Condition stationary. Full work.
Age 32	7.	Scar and small sinus from G.S.W. chest below angle of left scapula. Percussion note impaired over left upper lobe. Fine inspiratory creps over both apices behind. Moist rales at angle of left scapula. Physical signs of bronchitis and emphysema	.001 .003 .005	Nil.	?	Doubtful	7. Lost sight of.
Age 25	8.	.....	.001	31-5-19	+		
Age 39	9.	Bronchitis, both bases.....	.001	18-8-19	Negative on three occasions until 12-11-20, 86 days after reaction	Bronchitis and emphysema. T.B. focus in left lower lobe	8. Died in Baguley, 27th February, 1920.
Age 26	10.	Broncho-respiratory breathing below angle of right scapula. Defective expansion at both apices	.001 .003 .005	July, 1919 June, July, 1919	Negative on six occasions	Chronic bronchitis, Nasal obstruction, Laryngitis, Positive	9. Condition stationary. Unfit for work. On domiciliary treatment for tuberculosis.
Age 34	11.	Impaired percussion note right apex. Diminished basal expansion right. Doubtful creps at extreme apex of right lung	.001 .005	Sept., 1919	Negative	Focal pleuritic rub. rt. base. Increase in sputum No general reaction.	10. Condition stationary. Full work.
Age 26	12.	Slight impairment of percussion note right apex. Doubtful occasional crepitations extreme apex	.001 .005 .01	Nov., Dec., 1919	Negative	None	11. Lost sight of.
Age 32	13.	Slight impairment of percussion note both apices. Some congestive crepitations at both bases	.001 .005 .01	May, 1919 Nov., 1919	None	None	12. Lost sight of.
Age 34	14.	Fibrosis right upper lobe. Impaired respiration note. Tubular breathing occasional fine rales	.001	Nov., 1919	None	Local reaction. Slight pain in right side. No general reaction	13. Lost sight of.
Age 40	15.	Bronchitis, emphysema, alcoholic gastritis	.001	Dec., 1919	Negative	Probable silicosis right lung. Left hospital prematurely	14. Lost sight of.
Age 52						Left prematurely before diagnosis complete	15. Died January, 1922, of active lesion.

TABLE II.—SHOWING THE APPLICATION OF TUBERCULIN TO THE DIAGNOSIS OF DOUBTFUL CASES IN 1920.

NOS.	PHYSICAL SIGNS	TUBERCULIN	SPUTUM	REACTION	DIAGNOSIS	AFTER HISTORY, 1928
1. Age 39	Impaired note left apex. Faint inspiratory eripitations, rather transient in type	.0001 Jan. .0005 .001 Jan. 1920	Negative	None	Not active	1. Lost sight of.
2. Age 26	Impaired percussion note. Transient crepitations right apex	.001 Feb. .005 .01 Feb. 1920	Negative	None	No evidence of active tuberculosis	2. T.B. positive. Died in Baguley, 2nd November, 1922.
3. Age 33	Impaired note left apex. Occasional scattered rhonchi generally. Post trusive creps left base. Infection of left vocal cord	.001 March. .005 .01 March. 1920	Negative	Creps appearing after .01 cc. O.T. in left lower lobe. No general reaction	Doubtful	3. Lost sight of.
4. Age 44	Patient obese. Impaired percussion note left apex. Signs of general bronchitis. Enlarged turbinate. Right nostril, nasal obstruction	.001 June, .005 .01 June. 1920	Negative	None	Bronchitis and emphysema. No evidence of active tubercle	4. Receiving treatment for bronchitis.
5. Age 38	Impaired percussion note right base, below scapular angle. Fine inspiratory epiphations	.001 June, .005 .01 June. 1920	Negative	None	No evidence of active tubercle	5. Died 23rd December, 1920, from chronic bronchitis and cardiac failure.
6. Age 27	X R y.—Fine consolidation spreading from roots of both lungs, especially right. Probably not active Tremors. Pulsation of arteries. Slight enlargement of thyroid. Impairment of percussion note right upper lobe and right root. Inspiratory phase rather harsh	.001 Nov. .005 .01 Nov. 1920	Negative	Temperature: 100 after .001. No focal or local reaction. No reaction after .005 cc. None	Hyperthyroidism. No evidence of active tubercle	6. Patient well and working.
7. Age 28	Percussion note right apex. Occasional post trusive rales right apex. Generalised bronchitis. Transient creps. Right apex. Nasal obstruction. Enlarged turbinates	.001 July, .005 .01 July. 1920	Negative	None	Doubtful	7. Bronchitis only.
8. Age 40	Impairment of percussion note, right upper lobe. Expiratory phase prolonged. X R y.—Root shadow right side. Considered suspicious only Scattered carotarinal signs in both lungs. Some diminution in expansion, right base. Rhinitis, pharyngitis. Both vocal cords infected in posterior two-thirds of their length	.002 Aug., .005 .015 .01 Aug. 1920	Negative	None, except local reaction after second and third doses	Not active tuberculosis	8. Keeps well and is in full work.
9. Age 38	Impairment of percussion note, right upper lobe. Expiratory phase prolonged. Deviated nasal septum. Blood pressure 170. Aenorrhaged aortic, second sound	.001 Sept., .002 .002 .01 Sept. 1920	None	None	No evidence of active tuberculosis	9. Lost sight of.
10. Age 38	Scattered carotarinal signs in both lungs. Some diminution in expansion, right base. Rhinitis, pharyngitis. Both vocal cords infected in posterior two-thirds of their length	.001 Nov., .005 .01 .01 Nov. 1920	Negative	None	No evidence of active tuberculosis	10. Patient working.
11. Age 29	Impairment of percussion note, right apex. Fine rales in both lungs. Deviated nasal septum. Blood pressure 170. Aenorrhaged aortic, second sound	.001 Nov., .005 .01 .01 Nov. 1920	Negative	None, except headache after second and third doses	No evidence of active tuberculosis	11. No treatment for pulmonary tuberculosis.
12. Age 36	Bronchitis and emphysema. Dilated stomach	None	None	None	Pyloric obstruction. Dilated stomach	12. Under treatment for bronchitis. Unfit for work.
						13. Lost sight of.

TABLE III.—SHOWING THE APPLICATION OF TUBERCULIN TO THE DIAGNOSIS OF DOUBTFUL CASES IN 1921.

NOS.	PHYSICAL SIGNS	TUBERCULIN	SPUTUM	REACTION	DIAGNOSIS	AFTER HISTORY, 1928
1. Age 25	Slightly impaired note right apex in front. Deficient expansion of both bases. Scattered rhonchi throughout both lungs. Congested nose pharynx	.001 } Jan. .005 } 1921	Negative	None	Bronchitis	1. Lost sight of.
2. Age 43	Impaired percussion note right apex. Rhonchi throughout both lungs. Emphysema	.001 } March, .005 } .01 .01 } 1921	Negative	Temperature : 100, and slight local reaction after .01. No focal or general reaction	Bronchitis Not active tubercle	2. Dead.
3. Age 58	Impaired percussion note to second rib. In front and fifth dorsal vertebra behind, with blowing breath sounds, emphysema	.001 } Jan. .005 } .01 .01 } 1921	Negative for T.B. Positive for albumin	No reaction	Diagnosis not complete	3. Died 4th May, 1921, from cerebral haemorrhage.
4. Age 38	Impaired percussion note over right side. Scattered rhonchi throughout right side. Fades both bases. Emphysema	.001 } July, .005 } .01 .01 } 1921	Negative	Local reaction to .01, with temperature of 99.2	Quiescent tuberculosis. Pleurisy, bronchitis, emphysema	4. Left the district.
5. Age 28	Slightly impaired percussion note over right lung. Poor respiratory murmur. Nasal obstruction	.001 } Nov. .005 } .01 .01 } 1921	Negative	Local reaction to .01	Probably quiescent tuberculosis, pleurisy	5. Died 1927.
6. Age 27	Impaired percussion note over left apex	.001 } Sept., .005 } .01 .01 } 1921	Negative	Temperature : 99 after .01, .005. No focal reaction	No evidence of active tubercle	6. Lost sight of.
7. Age 36	Impaired percussion note left apex in front and left lower apex behind with harsh inspiration $\times$ Ry—Enlargement of bronchial glands both roots	.001 } .005 } .01 }	Negative for T.B. Positive for albumin	Moderate local reaction and headache after the second .01. No focal reaction	Not pulmonary tuberculosis	7. Receiving treatment for bronchitis.

TABLE IV.—SHOWING THE APPLICATION OF TUBERCULIN TO THE DIAGNOSIS OF DOUBTFUL CASES IN 1922.

NO.	PHYSICAL SIGNS	TUBERCULIN	SPUTUM	REACTION	DIAGNOSIS		AFTER HISTORY, 1928
					CHRONIC BRONCHITIS	BRONCHITIS AND CARDIAC FAILURE.	
1. Age 42	Greatly diminished expansion of 1-ft lung. Bronchitis. <i>X Ray.</i> —Indicates chronic bronchitis	.005 { May, .01 } 1922	Negative	None	Chronic bronchitis	No evidence of active tuberculosis	1. Died 3rd October, 1927. Bronchitis and cardiac failure.
2. Age 41	Bronchitis and emphysema	.0002 { March, .001 { March, .005 { 1922 .01 }	Negative	None	Bronchitis.	No evidence of active tuberculosis	2. Died 29th March, 1923. Chronic bronchitis and cardiac failure.
3. Age 51	Bronchitis and emphysema	.0002 { March, .001 { March, .005 { 1922 .01 }	Negative for T.B. Positive for albumin	None	Bronchitis.	No evidence of active tuberculosis	3. Died 5th January, 1923. Certified acute pulmonary tuberculosis.
4. Age 16	Mediastinal new growth, pressing the heart to the left. Heart dilated, especially left side. <i>X Ray.</i> —Reports showed slow growth over a period of four months	.001 { August, .005 { 1922 .01 }	Negative for albumin	General reaction after .005 cc, slight local, no focal	Mediastinal neoplasm	No evidence of active tuberculosis	4. Died of mitral stenosis, 1924.
5. Age 53	Bronchitis <i>X Ray.</i> —Fibrosis on both sides. Calcified foci at the roots and one in right lower lobe.	.001 { Sept., .005 { 1922 .01 }	Negative	None	Bronchitis.	No evidence of active tuberculosis	5. Sputum contained tubercle bacilli, April, 1926. Bedfast.
6. Age 47	Impaired note right apex in front; left apex behind. Bronchitis	.001 { May, .005 { 1922 .01 }	Negative to T.B. and albumin	None	Bronchitis.	No evidence of active tuberculosis	6. Died 24th, April 1923. Chronic bronchitis.
7. Age 67	Poor percussion note over left apex. Bronchitis both bases. Mitral stenosis. B.P. 120	.0002 { August, .005 { 1922 .01 }	Negative to T.B. Positive albumin	None	Bronchitis	No evidence of active tuberculosis	7. Died 19th September, 1922. ? Heart failure.
8. Age 21	Impaired percussion note over left apex in front and behind. Harsh breath sounds over left front and base	.0002 { Sept., .005 { 1922 .01 }	None	None	Chronic laryngitis	No evidence of active tuberculosis	8. Condition stationary. No active signs.
9. Age 41	<i>X Ray.</i> —Heavy fibrosis both roots. Few calcified foci	.0002 { March, .001 { 1922 .005 { 1922 .01 }	None	None	Chronic laryngitis	No evidence of active tuberculosis	9. Lost sight of.
10. Age 20	Respiratory murmur weak over left apex. Larynx congested	.075 July, 1922	None	Doubtful focal reaction	No evidence of active tuberculosis	No evidence of active tuberculosis	10. Working full time.
11. Age 41	Impaired percussion note left apex front and back. Few creps. <i>X Ray.</i> —No evidence of any tuberculosis	.001 { March, .01 } 1922	Negative for T.B. Positive albumin	None	No evidence of active tuberculosis	No evidence of active tuberculosis	11. Works as labourer in cotton mill.
12. Age 31	Dullness over right apex behind with prolongation of expiration with both roots. Apices clear. <i>X Ray.</i> —Few calcified glands both apices in front. Trancient creps right apex	.001 { June, .005 { 1922 .01 }	After .001 doubtful focal reaction	None	Absconded before diagnosis was complete	After .001 doubtful focal reaction. Faint creps right apex and	12. Condition worse. Fit for light work.

TABLE V.—SHOWING THE APPLICATION OF TUBERCULIN TO THE DIAGNOSIS OF DOUBTFUL CASES IN 1923.

NOS.	PHYSICAL SIGNS	TUBERCULIN	REACTION	SPUTUM	DIAGNOSIS	PRESENT CONDITION, 1928
1. Age 27	Slightly impaired note left apex behind. Breath sounds very weak both sides. Hysterical dyspnoea.	.002 .001 .005 .01 Jan, 1923 { -002 .001 .005 .01 March, 1923 { -001 .005 .01 .03	None  Local and General reaction after .03 T 101.4	Negative  None	Hysteria  Not active tuberculosis	1. Examined 17th January, 1928. Bronchial signs only.  2. Lesion at base of left lung. Nine months pregnant.
2. Age 27	Impaired note right apex in front. Expiration harsh and prolonged over same area	.001 .005 .01 .03 March, 1923 { -001 .005 .01 .03	None  Local and General reaction after .03 T 101.4	Negative  None	No active tuberculosis	3. Works as a carter for brewery.
3. Age 37	Impaired note left base and apex. <i>X Ray.</i> —Showed enlarged bronchial glands and increased root shadows	.001 .005 .01 April, 1923 { -001 .005 .01 April, 1923 { -001 .005 .01	None  Local and General reaction after .03 T 101.4	Negative  None	No active tuberculosis	

## ABERGELE SANATORIUM.

BY DR. A. G. M. GRANT, MEDICAL SUPERINTENDENT.

During the year ending December 31st, 1927, 124 patients were admitted and 125 were discharged. In addition, 5 children with non-pulmonary tuberculosis were admitted to Pen-y-Coed Bungalow and a similar number was discharged, viz., spine 2, hip 2, abdomen 1.

Table 1 shows a classification according to age and sex of the cases under treatment :—

Age	Males		Females	
	Admitted	Discharged	Admitted	Discharged
0 to 4	3	1	..	..
5 .. 14	2	3	..	1
15 .. 24	33	31	6	7
25 .. 34	28	26	5	4
35 .. 44	29	31	4	3
45 .. 64	19	22	..	1
65 +	..	..	..	..
Total	114	114	15	16

Table 2 shows a classification of the immediate results of treatment in the discharged pulmonary cases, grouped according to the classification of the Ministry of Health in Memorandum 37/T.

(a) Patients in whose sputum tubercle bacilli were not found :—

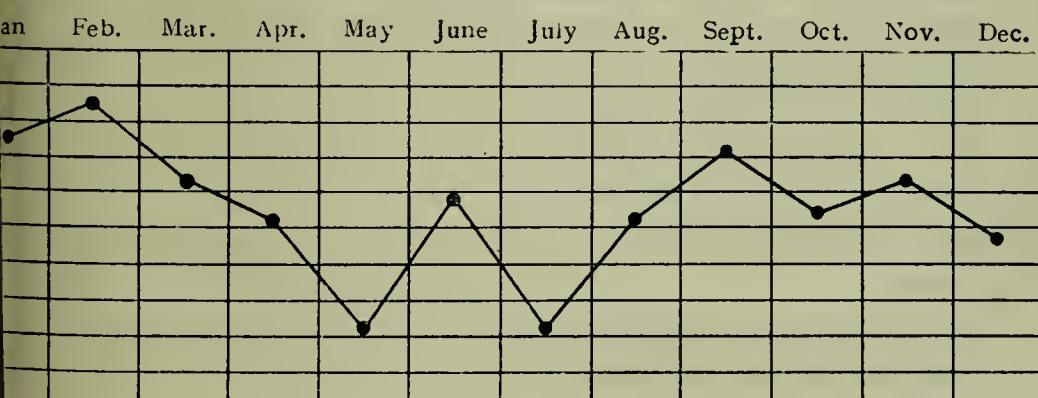
Condition at Time of Discharge	Duration of Residential Treatment in the Institution						
	Under 3 months		3—6 months		Over 12 months		
	M.	F.	M.	F.	M.	F.	
Quiescent	7	1	9	2	..	2	22
Improved	11	2	11	..	2	..	26
No improvement	1	..	..	1	..	..	2

(b) Patients in whose sputum tubercle bacilli were found:—

Condition at Time of Discharge	Duration of Residential Treatment in the Institution					Total
	Under 3 months	3—6 months	6—12 months	Over 12 months		
	M.	F.	M.	F.	M.	F.
<i>Group 1.</i>						
Quiescent . . . . .	1 ..	5 1	1 ..	.. ..	.. ..	8
Improved . . . . .	3 ..	3 ..	1 ..	.. ..	.. ..	7
No improvement . . . . .	1 ..	.. ..	.. ..	.. ..	.. ..	1
<i>Group 2.</i>						
Quiescent . . . . .	.. ..	2 ..	.. ..	1 ..	.. ..	3
Improved . . . . .	9 ..	9 ..	8 3	3 ..	.. ..	32
No improvement . . . . .	4 ..	.. ..	1 ..	.. ..	.. ..	5
<i>Group 3.</i>						
Quiescent . . . . .	.. ..	.. ..	1 ..	.. ..	.. ..	1
Improved . . . . .	.. ..	.. ..	.. ..	2 1	.. ..	6
No improvement . . . . .	8 1	1 1	.. ..	1 ..	.. ..	12

Of the discharged patients 111 gained in weight, the average gain being 9 lbs. 7 ozs.; 6 lost in weight, with an average loss of 2 lbs. 9 ozs; 1 remained stationary; while 7 were not weighed.

The seasonal effect on weight corresponds closely to that in former years. It has generally been noticed that the gains are lowest from April to August, while during the rest of the year they maintain a more or less even level. The following chart shows the average weekly gain per month throughout the year.



That atmospheric conditions influence weight increases is supported by the experience that gains are general to the majority of the patients on certain weeks and, similarly, with losses. These variations do not seem to correspond to any alterations in the dietary. During the extremes of heat and cold gains are at their minimum.

The general routine of treatment has been on the same principles as in former years.

Employment was found for the patients in the wards and chalets, in the gardens, on the lawns, roads, and paths, in wood chopping, stone breaking, and in guinea-pig rearing.

Ultra-violet light treatment by a Mercury vapour lamp was continued in cases of surgical tuberculosis.

*Estate.*

The afforestation scheme was further developed and a large number of pine trees were planted.

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## MONSALL HOSPITAL.

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REPORT BY THE MEDICAL SUPERINTENDENT,  
D. SAGE SUTHERLAND, M.D.

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1927.

At the beginning of the year 1927 there were 413 cases in residence and during the year 3,444 were admitted, making a total of 3,857 under treatment. Of these, 3,161 were discharged well or improved, 202 died, and 494 were in hospital at the end of the year. The admissions showed a decrease of 183 on the previous year.

The number of admissions from all diseases was greatest in the month of October. The total for the whole month was 437. The greatest number resident on any one day was 520 on 7th November, and the smallest, 329 on the 2nd and 4th March. The average daily number of patients in hospital was 393·7, as against 430·3 in 1926.

The average duration of residence of cases discharged was 41·2 days, as against 41·3 days in the previous year.

The fatality rate for all cases was 6·01 per cent., as against 5·91 per cent. in 1926.

The diagnosis of the medical attendant was revised in 305 cases, or 8·8 per cent. on all admissions.

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### SCARLET FEVER.

At the beginning of the year 230 cases were in residence, and throughout the year 1,420 were admitted, as against 1,811 in 1926, showing a decrease of 391. 1,419 were discharged and there were 14 deaths, giving a death-rate of 0·98 per cent., as against 1·13 per cent. during 1926.

The average stay in hospital of cases which recovered was 48·77 days, as against 47·93 days in the previous year, and of fatal cases, 15·28 days.

The disease continued to show an increasing number of very mild attacks, the diagnosis of many of which was of a doubtful nature, needing special isolation. The systematic employment of the Dick test on admission, and at intervals during the period of convalescence in these mild attacks, has helped to establish the diagnosis in reviewing these cases at a later period of the illness. Cases of scarlet fever failing to show immunity within three weeks have been immunised by carefully-graduated doses of scarlet fever toxin. This procedure has been carried out as a precautionary measure to prevent re-infection while in hospital and after return home.

Scarlet fever antitoxin has continued to be used in the more severe type of attack, but owing to the excessive mildness of the disease its use in all cases has been unnecessary. Its use for protecting contacts on the occurrence of scarlet fever in a diphtheria ward has become an established practice, and again and again it has proved itself of value.

The return case rate was 3·8 per cent., as against 3·7 per cent. in the previous year.

Otorrhœa occurred in 9·94 per cent. of cases, as against 10·57 per cent. in the previous year.

One hundred and thirty cases certified as scarlet fever were found to be suffering from diseases other than that certified, among which 5 fatalities occurred.

### DIPHTHERIA.

The number of patients admitted was 1,084, as against 897 in 1926, showing an increase of 187. There were 953 discharges and 70 deaths, giving a fatality-rate of 6·84 per cent., as against 8·7 per cent. in 1926.

Twenty-three deaths occurred within 48 hours of admission.

The average stay in hospital for patients who recovered was 48·06 days, and for fatal cases, 6·38 days.

Tracheotomy was performed in 32 cases, of whom 14 died, giving a death-rate of 43·7 per cent., as against 46·5 per cent. the previous year.

Ninety-nine cases certified as diphtheria were found to be suffering from diseases other than that certified. Of these, 9 were fatal.

The year 1927 has shown an exceptional prevalence of diphtheria, many of the cases being of a very severe type. The lower death-rate than the previous year is accounted for by the fact that a large number of contacts temporarily harbouring diphtheria bacilli were removed to hospital for isolation, thus increasing the number of cases on which the death-rate was calculated.

Considerable success in the more severe type has followed treatment by the intravenous injection of highly-concentrated anti-diphtheria serum by increasingly large doses.

In many of the cases referred to, the malignancy of the attack was evidenced by the shortness of the duration of the illness before coming under treatment and the extensive nature of the exudate and the glandular swelling.

Intravenous serum has also been employed with success in cases of laryngeal diphtheria.

#### **TYPHOID FEVER.**

At the beginning of the year there were 4 cases in hospital, and 18 cases were admitted during the year as enteic fever, 8 of which were erroneously diagnosed. No cases admitted as "other diseases" proved to be enteric fever. Of the 14 cases under treatment 10 were discharged well, 2 died, and 2 remained in hospital at the end of the year.

Removal to hospital took place during the second week of illness in 4 cases, 28·6 per cent.; during the third week in 2 cases, or 14·3 per cent.; during the fourth week in 4 cases, or 28·6 per cent.; during the fifth week in 2 cases, or 14·3 per cent.; and during the eighth week in 1 case, or 7·15 per cent. One case was a symptomless carrier.

The average day of disease on admission was 23·0 days. The average duration of residence of all cases discharged was 57·2 days, and of those who died, 8 days.

Six were males and 8 were females, and the average age of the patients was 25·9 years.

There were 2 deaths, giving a fatality-rate of 16·6 per cent. One case, admitted on the 28th day of disease, died 18 hours after admission, being moribund on admission to hospital. The second death was a severe paratyphoid B infection in a mentally-deficient epileptic removed from an institution. The cause of death was repeated haemorrhage.

A typhoid carrier admitted had previously infected her husband, who was already a patient.

Week of Illness	Mild		Moderate		Severe		Total Cases and Week of Illness	
	No. of Cases	Percentage	No. of Cases	Percentage	Recovered	Died	No. of Cases	Percentage
First	..	..	..	..	..	..	..	..
Second	..	1	33	1	33	2	40	..
Third	..	1	33	..	..	..	1	50
Fourth	..	1	33	1	33	1	20	1
Fifth	..	..	..	1	33	1	20	..
Eighth	..	..	..	..	..	..	..	1
Total	..	3	23	3	23	5	39	2
						15	13	

The type of disease was as follows :—

Three cases were mild, 3 moderate, and 7 severe.

\* Includes healthy carrier not included in above Table.

Fifty per cent. of the cases had one or more complications:—

No case of perforation occurred during the year.

**Corrected diagnosis—**

### ERYSIPelas.

One hundred and thirty-two cases were admitted, a decrease of 7 on the previous year, and 112 cases were discharged. There were 16 deaths, giving a mortality rate of 12·5 per cent., as against 10·29 per cent. in the previous year.

The use of anti-scarlet fever serum in these cases was followed by considerable improvement and a more rapid subsidence of temperature.

### MEASLES.

One hundred and seventy-seven cases were admitted and 126 were discharged. Twenty-six deaths occurred, giving a fatality rate of 17·1 per cent.

The high mortality is explained by the fact that only the more severe type of case, frequently complicated by broncho-pneumonia, was removed during a period of high epidemic prevalence in the City.

A report on the use of convalescent serum in the protection of children exposed to measles infection is appended (pages 137-141).

### PUERPERAL FEVER.

The number of admissions was 119, as against 159 in the previous year, showing a decrease of 40. One hundred and seven cases were discharged cured and 12 deaths occurred, giving a case-mortality of 10·08 per cent., as against 18·98 per cent. during the previous year. Three deaths occurred within 48 hours of admission.

The average stay in hospital of those who recovered was 44·8 days, and of fatal cases, 17·91 days.

The average day of disease on admission to hospital was the fifth day.

Sixty-two infants were admitted with mother, of whom 3 died, and the duration of stay in hospital of the remainder was 38·66 days.

### OTHER INFECTIOUS DISEASES.

The following table gives the admissions of other infectious diseases during the year :—

Encephalitis lethargica	..	..	..	..	..	..	4
Rubella	..	..	..	..	..	..	8
Whooping cough	..	..	..	..	..	..	18
Chickenpox	..	..	..	..	..	..	5
Cerebro-spinal fever	..	..	..	..	..	..	4
Poliomyelitis	..	..	..	..	..	..	3
Smallpox (transferred to Clayton Hospital)	..						1

### CRÈCHE (MALNUTRITION AND RICKETS).

The 8 cots of the Crèche were fully occupied throughout the year. There were 19 admissions and 18 discharges. No deaths occurred.

## TABLES FOR 1927.

TABLE SHOWING NUMBERS OF VARIOUS DISEASES TREATED.

DISEASE	Remaining in Hospital, Jan. 1st, 1927	Admitted	Discharges and Deaths	Remaining in Hospital, Dec. 31st, 1927
Scarlatina .....	230	1420	1433	217
Diphtheria .....	126	1084	1023	187
Enteric Fever .....	4	10	12	2
Erysipelas .....	17	132	128	21
Puerperal Fever .....	12	119	119	12
Measles .....	3	177	152	28
Other Diseases .....	21	502	496	27
Total.....	413	3444	3363	494

## DIPHTHERIA.

AGE OF PATIENTS	MALE		FEMALE		TOTAL	
	Cases	Died	Cases	Died	Cases	Died
Under 1 year .....	10	2	10	2	20	4
1 to 2 years .....	18	8	13	1	31	9
2 „ 3 „ .....	30	3	25	5	55	8
3 „ 4 „ .....	40	4	29	3	69	7
4 „ 5 „ .....	55	3	44	3	99	6
5 „ 10 „ .....	225	16	254	15	479	31
10 „ 15 „ .....	78	3	83	1	161	4
15 „ 20 „ .....	25	1	23	...	48	1
20 „ 25 „ .....	8	...	18	...	26	...
25 „ 30 „ .....	2	...	5	...	7	...
30 and over .....	7	...	21	...	28	...
Total .....	498	40	525	30	1023	70

The case mortality per cent. was :—Males, 8·03; Females, 5·7—All cases, 6·8.  
23 deaths occurred within 48 hours of admission.

Of the deaths, 2 were complicated by other coexistent diseases.

## COMPLICATIONS IN DIPHTHERIA.

Complication	Number	Percentage
Adenitis (late) . . . . .	21	2·05
Otitis Media (includes one mastoid) . . . .	28	2·74
Palatal paresis . . . . .	35	3·42
Ophthalmoplegia . . . . .	10	0·98
Pharyngeal paralysis . . . . .	9	0·88
Ptosis . . . . .	1	0·10
Cardiac Arrhythmia . . . . .	60	5·86
Severe Albuminuria or Nephritis . . . . .	48	4·69
Cycloplegia . . . . .	5	0·49
Total . . . . .	217	21·21

## COMPLICATIONS IN SCARLET FEVER.

Complication	Number	Percentage
Rhinorrhœa in Convalescence ..	117	8·25
Otorrhœa ..... .	141	9·94
Nephritis .....	30	2·11
Albuminuria of Convalescence..	84	5·92
Adenitis and Abscess .....	10	·71
Endocarditis .....	1	·07

## TRACHEOTOMY CASES.

AGE OF PATIENTS	NO. OF PATIENTS	DIED	MORTALITY PER CENT.
Under 1 year .....	2	2	100
1 to 2 years .....	7	6	85·7
2 „ 3 „ .....	4	2	50·0
3 „ 4 „ .....	8	...	...
4 „ 5 „ .....	4	1	25·0
5 „ 10 „ .....	18	5	27·8
10 and over .....	...	...	...
Total .....	43	16	37·2

Of the deaths, 10 occurred within 48 hours of admission.

Included in the above cases are 3 in which tracheotomy was performed prior to admission, 2 of which recovered.

## COMPLICATIONS IN MEASLES.

Complication	Recovered	Died
Broncho-pneumonia .. . . . .	10	14
Laryngitis .. . . . .	2	1
Otorrhœa .. . . . .	8	—
Convulsions .. . . . .	..	1
Enteritis .. . . . .	4	2
Pleurisy (with Effusion) .. . . . .	2	..
Marasmus .. . . . .	1	..
Sepsis .. . . . .	2	2
Bronchitis .. . . . .	1	..

## OTHER DISEASES ADMITTED AS ENCEPHALITIS LETHARGICA.

	Recovered	Died
Acute Constipation .. . . . . . .	2	..
Blepharitis Marginalis .. . . . . .	I	..
Tuberculous Meningitis .. . . . . .	..	7
Cystic Kidney and Cerebral Haemorrhage .. . .	..	I
Hysteria .. . . . . . .	I	..
Functional Neurosis .. . . . . . .	I	..
Ulcerative Endocarditis .. . . . . .	..	2
Specific Hemiplegia .. . . . . .	I	..
Cerebral Haemorrhage .. . . . . .	..	2
Total .. . . . . . .	6	12

## POST-MORTEM EXAMINATIONS, 1927.

Tuberculous Meningitis .. . . . . . .	4
Streptococcal Meningitis .. . . . . . .	I
Pneumococcal Meningitis .. . . . . . .	I
Cerebellar Abscess .. . . . . . .	I
Broncho-pneumonia and Pyopericardium .. . . .	I
Lobar Pneumonia and Meningism .. . . . .	I
Cystic Kidney and Cerebral Haemorrhage .. . . .	I
Cerebro-spinal Fever .. . . . . . .	I
Puerperal Fever and General Peritonitis .. . . .	I
Suppurative Bronchitis and Broncho-pneumonia ..	I
Scarlet Fever .. . . . . . .	I
Carcinoma of Pylorus .. . . . . . .	I
Tuberculoma .. . . . . . .	I
	—
	16

## LABORATORY REPORT.

		Examinations		Positive	Negative	Total
Diphtheria	..	Cultures	.. .. .. .. ..	441	16,257	16,698
		Smears from throat and nose	..	46	110	156
Vincent's Angina	..	Smears	.. .. .. .. ..	19	16	35
Typhoid Fever	..	Widal reaction	.. .. .. ..	7	9	16
		Fæces	.. .. .. .. ..	..	58	58
		Urinies	.. .. .. .. ..	2	57	59
Paratyphoid Fever	..	Widal reaction	.. .. .. ..	1	15	16
		Fæces	.. .. .. .. ..	1	52	53
		Urinies	.. .. .. .. ..	1	51	52
Dysentery	..	Agglutinations	.. .. .. ..	5	1	6
		Fæces	.. .. .. .. ..	3	11	14
Venereal Disease	..	Gonococci	.. .. .. .. ..	1	24	25
Tuberculosis	..	Sputum	.. .. .. .. ..	..	3	3
		Cerebro-spinal Fluid	.. .. .. .. ..	4	1	5
Puerperal Fever	..	Cervical cultures	.. .. .. ..	..	..	96
		Blood cultures	.. .. .. .. ..	..	..	161
		Bacteriological examination of urines	.. .. .. .. ..	..	..	70
General	..	Blood cultures	.. .. .. .. ..	..	..	5
		Pus for organisms	.. .. .. .. ..	..	..	18
		Sputum for organisms	.. .. .. .. ..	..	..	3
		Pleural fluid	.. .. .. .. ..	..	..	3
		Cerebro-spinal fluid	.. .. .. .. ..	..	..	14
		Chemical examination of urines	.. .. .. .. ..	..	..	21
		Bacteriological examination of urines	.. .. .. .. ..	..	..	14
						17,601

Of 441 positive diphtheria cultures, the origin was as follows:—

## REPORT OF CASES TREATED IN THE BED ISOLATION WARD.

	Nature of Cases	No. of Cases
Scarlet Fever—	Persistent positive "Dick" reacting cases .. ..	17
" "	Isolation before discharge .. .. .. .. ..	16
" "	Diagnosis confirmed and transferred to Scarlet Fever Ward .. .. .. .. ..	28
" "	Septic .. .. .. .. ..	2
" "	Diagnosis not confirmed .. .. .. .. ..	75
" "	and Whooping Cough .. .. .. .. ..	8
" "	and Diphtheria .. .. .. .. ..	16
" "	and Mumps .. .. .. .. ..	2
" "	and Chickenpox .. .. .. .. ..	2
" "	and Diphtheria and Mumps .. .. .. .. ..	1
" "	and Tinea .. .. .. .. ..	2
" "	and Scabies .. .. .. .. ..	3
Diphtheria—	Diagnosis confirmed .. .. .. .. ..	14
" "	Diagnosis not confirmed .. .. .. .. ..	3
" "	Observation for Rash or Desquamation .. .. .. ..	38
" "	and Whooping Cough .. .. .. .. ..	6
" "	and Mumps .. .. .. .. ..	7
" "	Contact with Chickenpox .. .. .. .. ..	1
" "	and Rubella .. .. .. .. ..	1
" "	and Skin Diseases .. .. .. .. ..	5
" "	and Vaginitis .. .. .. .. ..	1
Chickenpox	.. .. .. .. ..	5
Mumps	.. .. .. .. ..	6
Erysipelas	.. .. .. .. ..	1
Measles	.. .. .. .. ..	18
Measles and Scarlet Fever	.. .. .. .. ..	1
Measles and Scabies	.. .. .. .. ..	3
Rubella	.. .. .. .. ..	16
Whooping Cough	.. .. .. .. ..	8
Pneumonia	.. .. .. .. ..	8
Tonsillitis	.. .. .. .. ..	14
Laryngitis	.. .. .. .. ..	2
Abscess	.. .. .. .. ..	2
Dentition	.. .. .. .. ..	2
Impetigo	.. .. .. .. ..	1
Nephritis	.. .. .. .. ..	1
Rheumatism	.. .. .. .. ..	1
Epilepsy	.. .. .. .. ..	1
Vincent's Angina	.. .. .. .. ..	1
Pemphigus	.. .. .. .. ..	1
Vaginitis	.. .. .. .. ..	1
Jaundice	.. .. .. .. ..	1
Total Cases	.. .. .. .. ..	342

## CROSS INFECTIONS.

Nature of Infection	No. of Cases
Measles (1 admitted in incubation stage) . . . . .	4
Chickenpox (1 admitted in incubation stage) . . . . .	4
Scarlet Fever . . . . .	2
Diphtheria . . . . .	1
Typhoid Fever (admitted in incubation stage) . . . . .	1
Total . . . . .	12

The Bed Isolation Ward has been in use for a number of years, but it was not until 1927 that the demand on its accommodation became really heavy, the admissions totalling 342. The scarlet fever and diphtheria admissions to the hospital kept at a high level, and the employment of more accurate diagnostic methods created a greater demand and use for this special isolation. From the table shown, it will be noted that 105 cases notified as suffering from scarlet fever were admitted to the Bed Isolation Ward, and that in 75 the diagnosis was not confirmed. Where the diagnosis is not confirmed, it is the custom to discharge the patient as soon as possible, and in the majority rarely later than the twenty-first day of the alleged disease. This has meant a reduction in days of residence, while the patient does not run the risk of contracting the disease after admission to the hospital.

In the treatment of scarlet fever it has been found by immunity tests, that a small percentage of cases remain susceptible to the disease, and are consequently liable to reinfection or relapse if they remain in scarlet fever wards. The Bed Isolation Ward has been employed for the isolation of 17 such cases before discharge, with good results.

Another function of the Bed Isolation Ward has been the isolation for about a fortnight before discharge of scarlet fever patients with obstinate long-standing discharges. Of these, 17 were isolated in the ward and did not give rise to return cases.

As regards the treatment of diphtheria, the Ward has been invaluable in providing isolation for patients with rashes of doubtful nature or desquamation. A glance at the table will show that 38 such cases were admitted.

Twenty-two cases of measles, 7 cases of chickenpox, and 22 cases of whooping cough were treated in the Ward. It should be noted that these were late cases of these diseases.

During the year 12 cases of cross infection occurred, the figures being shown above. It is noteworthy that the series of measles and chickenpox cases were initiated in each case by a patient admitted in the incubation period of the disease, and that the case of typhoid fever developed also as a result of infection before admission. These are unavoidable accidents as a rule, consequently the incidence of cross infection otherwise becomes almost negligible.

## SCARLATINAL ANTITOXIN.

Scarlatinal antitoxin was not employed frequently during 1927 owing to the excessive mildness of the disease, but in all cases of more than average severity doses of 10 to 40 c.c. of concentrated serum were administered on admission. In all, 56 cases were thus treated with a mortality of 4, 3 of these being due to a septic type of the disease, and the remaining case to a toxic type. On account of the severity of the attacks no conclusions can be drawn from the figures as affecting the average stay in the hospital of the recovered cases, but these are given below:—

Number of cases treated .. .. .. .. .. .. .. .. .. ..	56
Number of deaths .. .. .. .. .. .. .. .. .. ..	4
Average stay in hospital of recovered cases, in days .. .. .. ..	70·7
Average stay in hospital of all cases, in days .. .. .. ..	48·4

## SCARLET FEVER RETURN CASES.

Of the infecting cases—

5 gave rise to 2 return cases; and

I gave rise to 4 return cases.

An analysis of the infecting cases showed that 29 developed complications in the course of the disease, and that in these cases 5 developed 2 complications.

The complications noted were as follow:—

	In Hospital	Present on Discharge	Noted on return home by Parents	Developed after return home
Adenitis .. . . . .	14	3	1	..
Nasal conditions (discharge, sores) ..	12	2	10	5
Ear conditions .. . . . .	2	..	..	..
Skin conditions (sores, etc.) .. . .	3	1	4	1
Albuminuria .. . . . .	3	..	..	..
Sore throat .. . . . .	..	..	1	1
Enlarged tonsils .. . . . .	..	9	..	..
Desquamation on hands .. . . .	..	7	2	..
Desquamation on feet .. . . . .	..	..	14	2

No attention is paid to desquamation on the feet on discharge, but it is obvious that many people still cling to the idea that desquamating skin is infectious. The importance of nasal discharge in the production of return cases is again demonstrated by the above table.

Return cases developed the disease during the following intervals after the return home of the infecting case :—

During the first week	.. .. .. .. ..	24
„ second „	.. .. .. .. ..	21
„ third „	.. .. .. .. ..	2
„ fourth „	.. .. .. .. ..	4

A week's isolation at home is recommended for every discharged case, but the impossibility frequently of carrying this precautionary measure out is apparent from the above figures.

The return case rate has remained almost stationary, the figure for 1926 having been 3·7 per cent.

#### AURAL REPORT.

JANUARY TO DECEMBER, 1927.

The total number of scarlet fever cases during 1927 was 1,433, as against 1,757 during 1926, of which 671 were males and 762 were females.

The number of cases of otitis media in scarlet fever was 141, of which 76 were males (11·3 per cent.) and 65 were females (8·5 per cent.).

The incidence of otorrhœa among scarlet fever cases was 9·94 per cent.:

One hundred and eleven cases of otitis media following scarlet fever were treated in the special ward for ear complications. Thirty cases were treated in the general scarlet fever wards.

The average day on which the complication of otitis media arose was the 24th day of illness, as against the 22nd day in the previous year, and the average duration of the otorrhœa (excluding old standing chronic cases) was 28·1 days, as against 27 in the year 1926.

The average age of the patients under treatment was 5 years.

Tonsillectomy and adenoidectomy, or adenoidectomy alone, was performed in 35 cases, as against 54 during the year 1926. The average period of duration of otorrhœa after operation was 17 days, as against 14 days during the previous year.

Conservative mastoid operations, including 3 cases of bilateral mastoiditis, were performed in 21 cases, as against 27 cases in 1926.

Radical mastoid operations were performed in 2 cases, including 1 case requiring bilateral operation.

The mastoid operation was necessary in 16 per cent. of cases of otitis media.

The Aural Surgeons report that the work of the Aural Department has proceeded upon the lines of the previous year. Unfortunately, the duration of the stay in hospital of patients with discharging ears has not diminished as was hoped. This is partially due to the fact that the late months of the year were associated with a secondary diphtheric bacterial infection, which delayed the systematic removal of tonsils and adenoids and tended to prolong the convalescent period.

It is hoped that ionisation will be introduced as a routine into the treatment at an early date, and that the discharge of patients will be expedited.

As previously noted, the complications of otitis media were of late date : the massive necrosis of early scarlet fever mastoiditis has been almost entirely absent. This suggests that the virulence of the organism has in the last year somewhat diminished. The administration of anti-scarlet fever serum in all severe attacks of the disease may have tended to reduce the virulence and neutralise the toxins in the circulation, thus preventing much septic embolism.

#### THE CONTROL OF INFECTIOUS DISEASES AMONGST THE NURSING STAFF.

##### *Diphtheria.*

During 1927, new members of the nursing staff numbered 84. These were "Schick" tested on joining the hospital, with the following results :—

Reaction positive .. . . . .	15
Reaction pseudo-positive .. . . .	3
Total positive reactors .. . . . .	18—i.e., 27·2 per cent.
—	—
Reaction negative .. . . . .	59
Reaction pseudo-negative .. . . .	7
—	—
Total negative reactors .. . . . .	66—i.e., 72·8 per cent.

Of the positive reactors, 15 received 3 inoculations of toxoid antitoxin, the remaining 3 having resigned before this could be done. Retests were carried out after an interval of 3 months had elapsed, but 2 left the hospital before this was possible and 1 developed diphtheria a month after the last inoculation. Of the remaining 12, the records are as follows :—

Reaction negative .. . . . .	7
Reaction weakly positive .. . . .	1
Awaiting retest .. . . . .	4

It is significant that no member of the nursing staff who received the prophylactic inoculations, and was shown to have an established immunity by means of the "Schick" test, developed diphtheria.

Five nurses, who joined the staff in 1927 had not been immunised, contracted diphtheria during the year.

#### *Scarlet Fever.*

Routine "Dick" tests were performed on all individuals on joining the nursing staff, with the following results:—

Reaction positive .. . . . .	13
Reaction pseudo-positive .. . . .	2
	—
Total positive reactors .. . . .	15—i.e., 22 per cent.
Reaction negative .. . . . .	60
Reaction pseudo-negative .. . . .	8
	—
Total negative reactors .. . . .	68—i.e., 78 per cent.

In addition, 2 members of the medical staff were found to be positive reactors. Immunisation was carried out on the lines indicated in the annual report for the previous year. One nurse, who gave a very weakly positive reaction, was not immunised, and another resigned before inoculation could be performed. In all, 13 nurses and 2 physicians were inoculated in the course of the year. It is the routine procedure to administer 4 graduated doses of scarlatinal toxin, equivalent to 500, 2,000, 5,000, and 10,000 skin doses, at 4-day intervals. Retests are not performed now until it is proposed to place a nurse on duty in the scarlet fever ward, and, as a rule, an interval of at least 3 weeks has elapsed after the last inoculation. When the retest shows that the individual still retains a considerable susceptibility to scarlet fever, a second course of inoculation is given, finishing with an inoculation of 20,000 skin doses.

The statistics for 1927 are as follows:—

Number inoculated .. . . . .	15
"Dick" negative after 1 course of injections .. . . . .	12
,, negative after 2 courses of injections .. . . . .	2
,, weakly positive after 1 course of injections, and did not receive a second course .. . . . .	1

During the year only 2 cases of scarlet fever occurred among the nursing staff—1 where a "Dick" negative reaction had been obtained and 1 where

the nurse had received prophylactic injections and reacted negatively 3 weeks later. This latter is the only recorded case of an inoculated nurse developing the disease in the hospital since immunisation was instituted. It may be noted in passing that the attack was of an extremely mild description. Immunisation has been practised for almost 2 years, during which period 22 nurses and 2 physicians have been inoculated and protected, with the exception to which reference has already been made. During the period over 3,000 cases of scarlet fever have passed through the hospital, and it is exceedingly gratifying to record that only 3 members of the nursing staff were infected (1 recorded in 1926). How long the artificially-produced immunity will last cannot be stated, but there appears to be every indication that it is of substantial duration. The first nurse to be inoculated nearly 2 years ago is still on the staff and still retains her immunity. The optimistic note struck in the last Annual Report appears to be justified, and 2 years' experience suggests that immunisation against scarlet fever is an even more effective instrument in an infectious diseases hospital than immunisation against diphtheria, on account of the rapidity with which it can be established.

#### *Other Infectious Diseases.*

Inoculation against typhoid fever continues to be practised routinely, and no case of the disease has occurred in the nursing staff. In the course of the year 2 cases of erysipelas and 1 of measles have occurred in the nursing staff.

#### THE PERSISTING POSITIVE "DICK" REACTION.

Secondary attacks of scarlet fever are not uncommon in scarlet fever wards in infectious diseases hospitals, and experience has shown that these may be divided into two groups. The first contains cases in which some doubt may have existed as to the correctness of the original diagnosis. Such cases are more appropriately treated in a bed isolation ward. The second group consists of cases in which the original attack is undoubtedly scarlet fever, but in which the stimulus to the production of an immunity has been insufficient. Such cases are readily discovered by routine "Dick" testing at weekly intervals. During 1927, 18 cases of secondary attacks were recorded in the scarlet fever wards of Monsall Hospital, and of these 13 could be classed in the second group. In other words, these latter cases were known to arise where a positive "Dick" test had persisted. The number is not large, but it must be remembered that the younger children with persisting positive "Dick" reactions were kept in bed, and consequently allowed less opportunity for reinfection, while a number were transferred to the bed isolation ward or other isolation wards, pending discharge home. The number, however, is sufficiently large to indicate the desirability of devising some means to prevent the occurrence of such cases.

It is reasonable to think that the methods employed in active immunisation might be successful. Accordingly, during the year, scarlatinal toxin has been used as an additional stimulus in persisting positive "Dick" reactors. At first an inoculation of 500 skin doses was employed if the "Dick" test was positive on the 21st day of the disease. The patient was kept in bed and tested a week later. The figures given below will show that this is frequently insufficient, and, therefore, in later cases, a second and even a third or fourth larger inoculation was given. The success of this line of treatment is apparent from the study of the figures, as only one patient who received any toxin whatever subsequently developed a secondary attack. The figures show that only about 50 per cent. of the cases developed immunity after receiving toxin injections, but in the remainder there was invariably a reduction in the degree of susceptibility. Experience shows that quite a number of patients maintain a marked susceptibility to the disease in spite of inoculations of toxin, even in large doses. This type requires isolation, as indicated above.

1927.

No. of Patients	Toxin		" Dick " Test		Reinfections
	No. of Inoculations	Maximum Skin Doses	Remains Positive	Becomes Negative	
41	1	500	19	16	1
77	1 or 2	1,000	41	45	..
18	2 or 3	2,500	18	10	..
17	3 or 4	5,000	9	7	..

Note.—In some cases the retest had to be omitted.

## REPORT ON PUPERAL SEPSIS.

The special lines of treatment indicated in last year's report have been assiduously pursued, although the number of cases treated has shown a considerable decline on the previous two years. The admissions totalled 119, the discharges were 107, while there were 12 deaths.

Of the admissions—

75 were multiparae, and

44 were primiparae.

Of these—

86 were full-time labours,

0 were premature,

15 were complete abortions, and

18 were incomplete abortions.

Three cases admitted as puerperal fever were found to be incomplete abortions, without any evidence of sepsis.

During the year 19 cases were admitted as puerperal pyrexia, but in 15 cases the diagnosis was altered to puerperal fever. In the remaining 4 cases the average duration of stay in hospital was 34 days.

The following are the figures for the last three years :—

	Admitted	Case Mortality
1925	144	15·2
1926	159	19·0
1927	119	10·1

The case-mortality figure for the year is satisfactory, taking into account the fact that there was a large number of severe cases admitted late in the disease, as in 1926. As will be demonstrated later, the recovery rate of the septicæmic cases has shown a progressive increment.

The duration of stay of the patients in hospital has remained high for the reasons adduced in last year's report, and also because of two additional factors—

(a) Routine urine cultures have shown a relatively high percentage of cases with symptomless bacilluria, and an effort has been made to clear these up prior to discharge.

(b) An effort has been made to examine a series of ex-patients 12 months subsequent to discharge, and to consider their present health in association with their clinical condition on discharge. The data gleaned from this source has suggested that a prolonged stay in hospital and consequent rest were a marked factor in combating puerperal morbidity.

Days' Residence of Recovered Patients	Fatal Cases
1925    ...    ...    26·5	14·6
1926    ...    ...    37·3	15·4
1927    ...    ...    44·8	17·9

If, however, 7 very prolonged cases are excluded, the duration of stay falls to 35·5 days. A résumé of these 7 cases is as follows :—

*Case No. 122.*—In hospital 317 days and was operated on four times, as mentioned in last year's report. Three months after discharge she was re-examined and found to be fit and well.

Drainage of pelvic abscesses... . . . . . 2 operations.

Drainage of tubo-ovarian abscess . . . . . 1 operation.

Panhysterectomy and double oophorectomy . . . . . 1 , ,

*Case No. 156.*—Very severe lacerations, which led to formation of large para-vaginal abscesses. Convalescence complicated by pleurisy and cystitis. Stay in hospital was 177 days.

*Case No. 212.*—In hospital 152 days, having developed ileus paralyticus 12 days after admission. Colostomy was performed, and the abdomen could not be closed again for another two months owing to the precarious condition of the patient.

*Case No. 221.*—In hospital for 129 days. Had double phlegmasia, right hemianæsthesia, left facial palsy, bulbar paresis, and paralysis of left arm. Made an excellent recovery.

*Case No. 228.*—In hospital for 130 days, with marked inflammatory infiltration of entire pelvis. Posterior colpotomy was performed 3 weeks after admission, and the wound had to be reopened on two subsequent occasions.

*Case No. 293.*—Admitted 2 days after discharge from another hospital. Severe pulmonary infarction soon after admission, and a phlegmasia appeared which took weeks to subside. Patient in hospital for 112 days.

*Case No. 304.*—Ill for 6 weeks prior to confinement. Suffered from fairly severe septicæmia, with repeated small pulmonary infarctions. In hospital 126 days, but made excellent recovery.

The number of infants admitted has been in proportion to the total admissions—

1925	.. . . . .	77
1926	.. . . . .	78
1927	.. . . . .	63

About two-thirds of the infants were breast-fed for part at least of their stay in hospital. Three died in hospital.

Despite increased knowledge of the resources of the hospital in treating puerperal sepsis, the average day of disease on admission continues to be the fifth, as in former years.

The main lines of treatment have been much as in the past few years. It will be seen by comparing the figures that lymph drainage of the uterus has not been so extensively employed. Experience has led to different standards being adopted in selecting the cases suitable for this treatment. Only 314 glycerine-iodine irrigations were performed, as compared with 787 in 1926.

Whole blood transfusion has not been carried out on any case during the year, as no case, as will be seen from the short description of the fatal cases, proved suitable. Rehearsals of the technique of this operation have been held to ensure efficiency in its employment. Owing to the small number of septicæmic cases, relatively few intravenous arsenical administrations were performed (as compared with 46 in 1926), but the policy of repeated small doses in all suspicious cases, as outlined in the Medical Research Council's Special Report No. 119, has been carried out.

The septicæmic recovery rate shows a progressive improvement from last year, being 16 cases, with a case-mortality of 41·6 per cent. Promising results have accrued from intramuscular injection of fairly large doses of anti-scarlatinal serum. Cases have been selected which showed severe toxæmia, with no symptoms or signs of septicæmia.

During the year the volume of laboratory work has gradually increased, despite the absence of skilled laboratory assistance for some months.

	Cervical Cultures	Blood Cultures	Urine Cultures
1925 .. .. ..	38	48	—
1926 .. .. ..	155	126	15
1927 .. .. ..	96	161	70

Routine cultures of the urine have been carried out very frequently, as observation has shown that a symptomless coliform bacilluria is not an unusual late sequela of puerperal infection.

An analysis of the bacteriological finding of the 96 cervical cultures is shown, the cases being consecutive except that a cervical culture was omitted in those cases considered too ill for uterine irrigations.

During the year anaerobic blood cultures were occasionally incubated in cases where septicæmia was suspected, but where no organisms had been grown by other methods. No organisms were grown on these anaerobic cultures.

A brief synopsis of the clinical histories of the 12 fatal cases during 1927 is appended, 3 of which took place within 48 hours of admission.

*Case No. 204.*—Admitted 18-12-26, on eighth day of illness. Condition very poor on admission. Mild puerperal sepsis and very severe bronchitis. Gradually went downhill through failing heart and died on sixteenth day after admission.

*Case No. 206.*—Admitted 16-12-26, on ninth day of illness. Poor physique with much myxodema. Septicæmia present on admission. On 19-12-26 operated on for ischio-rectal abscess, causing sub-acute obstruction. Septicæmia disappeared under treatment. On twenty-third day sudden severe return of septicæmia, which proved intractable. Patient died 4 days later.

*Case No. 213.*—Admitted 1-1-27, on seventh day of illness. Confined 14 days prior to admission. Got out of bed on day prior to admission and developed R. phlegmasia and a massive streptococcal septicæmia. Age 38. Condition critical on admission, but survived for 8 days.

*Case No. 214.*—Admitted 6-1-27, on fifth day of illness. Collapsed and unconscious on admission owing to severe streptococcal septicæmia. Died in 20 hours.

*Case No. 251.*—Admitted 7-5-27, on twenty-fifth day of illness. History of severe lacerations and 10lb. baby. Condition critical on admission owing to general peritonitis, and laparotomy was performed three hours later. Patient died 64 hours after admission. Autopsy performed.

*Case No. 257.*—Admitted on 20-5-27, on fourth day of illness. Age 38. Patient not acutely ill, but whole pelvis infiltrated with pus. On 18-8-27 a large gluteal abscess pointed and was incised at two sites. Later, wet gangrene developed at these sites, and the patient died 99 days after admission.

*Case No. 287.* Admitted 2-8-27, on sixth day of disease. Complicated labour. Patient developed a pulmonary infarct, and died suddenly from pulmonary embolism on the following day, 6 days after admission.

*Case No. 292.*—Admitted 6-8-27, on sixth day of disease. Hydrocephalus with perforation and manual removal of the placenta. Mild septicaemic condition on admission, but died suddenly from pulmonary embolism 14 days after admission.

*Case No. 324.*—Admitted 5-II-27, on sixth day of illness, with history of rigors and delirium. General peritonitis diagnosed on admission, and laparotomy performed. Patient died within 48 hours. Coroner's inquest.

*Case No. 327.*—Admitted 16-II-27, on fourth day of illness. Marked anaemia on admission, following complicated labour. Never had any signs of septicæmia, but developed gangrene of lung with severe haemoptysis, streptococci being demonstrated repeatedly in the sputum. Died 32 days after admission.

*Case No. 331.*—Admitted 6-12-27, on thirty-first day of disease. History of complicated labour and severe illness for a month, with rigors, occasional haemoptyses, and delirium. On admission all limbs practically rigid with generalised phlebitis. Died 8 days after admission from asthenia.

*Case No. 336.*—Admitted 17-12-27, on sixth day of illness, having had no symptoms for 3 weeks after confinement. Very collapsed on admission, and died within 12 hours from severe streptococcic septicæmia.

It will thus be noted that of the 12 deaths during the year, two occurred in patients admitted at the close of the previous year, and that of the 3 deaths which could be ascribed to septicæmia, 2 occurred in the first week of the year, and the third nearly twelve months later and only 12 hours after admission.

The 10 deaths which occurred in patients admitted during the year may be classified as follows:—

Septicæmia .. .. ..	3	Asthenia .. .. ..	1
General peritonitis ..	2	Pulmonary embolism.	2
Gangrene .. .. ..	2		

The absence of complications has again been a marked feature of the 107 recovered cases, if one excludes the symptomless bacilluria already mentioned, the complication rate being 17 per cent. as compared with 24 per cent. in 1926. The details are as follows:—

Pelvic abscess . . . . .	I
Parametritis . . . . .	I
Parametritis and axillary abscess . . . . .	I
Phlegmasia, one leg . . . . .	I
Phlegmasia, both legs . . . . .	2
Pleurisy and phlegmasia, both legs . . . . .	I
Pæymic abscesses . . . . .	I
Facial erysipelas . . . . .	I
Pelvic cellulitis . . . . .	I
Pulmonary infarct . . . . .	3
Double mastitis . . . . .	I
Herpes labialis . . . . .	I
Vesico-vaginal fistula . . . . .	I
Ileus paralyticus . . . . .	I

The number of operations performed showed a diminution from last year, being 11 instead of 19, and were as follows :—

Dilatation and curettage . . . . .	5
Iliac and gluteal abscesses . . . . .	2
Laparotomy and drainage . . . . .	3
Inguinal colostomy and subsequent closure ..	I

A case admitted in March, 1927, which was complicated by auricular fibrillation, and which was treated by mass dosage of digitalis, was considered so unusual that an epitome of the clinical notes was printed by the Journal of the American Medical Association.

It will be seen from this short report that the promise held out by the standardisation of more modern lines of treatment for puerperal sepsis has been fully maintained. The case-mortality rate is lower, the complication rate is lower, the percentage of recovered septicæmic cases continues to rise, and the amount of surgical interference required continues to decrease.

## ILLNESS OF NURSING STAFF, 1927.

Condition	No. of Cases	Days lost	Days light duty
Ear, nose, and throat conditions—			
Tonsillitis or pharyngitis .. . . .	59	565	4
Rhinitis .. . . .	3	12	..
Otalgia, otorrhœa .. . . .	3	5	..
Alveolar abscess .. . . .	4	..	..
Vincent's angina .. . . .	3	92	..
Laryngitis .. . . .	1	5	..
Pyorrhœa .. . . .	1	..	14
Infectious diseases—			
Scarlet fever .. . . .	1	59	..
Diphtheria .. . . .	6	213	..
Erysipelas .. . . .	2	11	..
Measles .. . . .	1	14	..
Chest conditions—			
Febrile catarrhal conditions (influenza and common colds) .. . . .	21	143	..
Bronchitis .. . . .	3	21	..
Chronic cough .. . . .	2	9	..
Pleurodynia .. . . .	1	5	..
Pleurisy .. . . .	1	23	..
Hæmoptysis .. . . .	1	4	..
Skin diseases .. . . . .	15	13	11
Septic sores .. . . . .	24	30	1
Conjunctivitis, etc. .. . . .	7	9	..
Abdominal conditions .. . . . .	6	116	..
Injuries to bones and joints, cuts, etc. ..	21	163	10
Scalds and burns .. . . . .	4	..	..
Debility .. . . . .	6	3	..
Rheumatism .. . . . .	2	..	..
Adenitis .. . . . .	3	10	1
Anæmia .. . . . .	1	..	..
Neurasthenia .. . . . .	2	8	..
Other conditions .. . . . .	2	..	..
Inoculation malaise .. . . . .	12	12	..
Total .. . . . .	218	1,545	41

## THE PREVENTION OF MEASLES BY THE USE OF CONVALESCENT SERUM.

Some years have now passed since use was first made of convalescent serum in the prevention of measles. Credit for the first published results must be given to Nicolle and Conceil in France, and Park and Zingher in America, whose work saw the light in 1916. In 1920 and 1922, Degkwitz, in Germany, made further research into the question, and was able to give protection to 85 per cent. of susceptible children. Very little work has been done in this country, but convalescent serum has been tried on a small scale in Harrogate and Edinburgh during the past year.

Towards the end of 1927 a large epidemic of measles broke out in Manchester and this furnished the opportunity to make a local study of the use of convalescent serum.

### *Prophylactic Use.*

In the early stages of the 1927 measles epidemic in Manchester it was considered desirable to prove the efficacy of the serum, and no attempt was made to control absolutely the disease when it appeared as a cross infection in the wards of the hospital. For that reason susceptible children in intimate contact with infection in a ward were chosen, and half were inoculated, the others serving as controls. In the later stages of the epidemic, convalescent serum was used with the intention of preventing subsequent cases in a ward. In an infectious diseases hospital sero-prevention is more important than sero-attenuation, hence no attempt was made at the latter during the epidemic.

### *Donors.*

For the provision of convalescent serum the choice of donors in an infectious diseases hospital is necessarily limited by the scarcity of adult patients suffering from measles, and by the fact that the majority of the children have been admitted on account of lung complications or general debility. Further, the comparative shortness of an epidemic leaves little time for the accumulation of serum. In the course of two months, six donors were obtained who appeared to be healthy and free from complications or constitutional disease. Three of these were children 5 years of age, from whom only a small amount of blood could be obtained. The others comprised two youths, 16 and 19 years of age, and a nurse, 20 years of age, from each of whom it was not considered desirable to remove more than 200 c.c. of blood. All were bled between the seventh and tenth day after defervescence, and the serum prepared in the manner to be described. It was not found possible to pool all the samples of sera, but care was taken to include at least two samples of serum in every prophylactic inoculation.

*The Preparation of the Serum.*

The serum was prepared according to the method advised by Debré and Joannon, the details of which may be given.

1. The blood, after removal from the donor, is allowed to coagulate at room temperature for 36 to 48 hours. 35 to 40 per cent. of serum, compared with the quantity of the blood, is thus obtained.
2. For the sake of security a Wassermann reaction is performed with the serum at this stage.
3. The serum is heated at 56° C. on two successive days. Degkwitz prefers to add a drop of 5 per cent. carbolic acid to each 10 c.c. of serum, while other workers suggest the use of formalin. Filtration is not recommended, as this is stated to hold back a considerable amount of the immune bodies.
4. The sterility of each sample of serum is next tested by cultural methods.
5. To obtain the best results, serum from several donors should be mixed.
6. The mixed sera should again be tested by cultural methods.
7. The serum is afterwards stored in an ice chest.

*The Administration of the Serum.*

The serum was administered to all the cases by the subcutaneous route. Although there was no ground for suspecting specific sensitiveness, caution was employed in the earlier cases, and a few minims of the serum were inoculated a few hours before the prophylactic dose. No adverse results were noted and no severe reactions occurred at the site of inoculation. It is also of interest to note that in no case was the inoculation followed by a serum rash or any constitutional disturbance whatever.

*Record of Cases receiving Prophylactic Inoculations of Convalescent Serum.*

1. J.P. Age 2.	Received 10 c.c. on third day after exposure.
2. R.S. Age 4½.	" " "
3. A.T. Age 4.	" " "

In a scarlet fever ward containing 14 children, 6 were found to have no previous history of measles, and the 3 noted above were in cots adjacent to a patient who developed measles in the ward. Within 6 weeks the 3 uninoculated children all developed measles, along with 3 other children who were stated to have had measles before admission to hospital. The inoculated children were exposed to infection on several occasions and failed to develop measles. J.P. was under treatment in the same ward for 62 days after inoculation, R.S. 30 days, and A.T. 45 days.

4. A.B. Age 3. Received 10 c.c. on second day of exposure.

Three children suffering from scarlet fever were being treated in cots in a ward which normally was used for one bed patient. It will be seen that contact was distinctly intimate. One child developed measles and it was decided to inoculate the youngest, leaving the other, a boy of 5 years of age, as a control. Neither were recorded to have had measles previously. At the end of the incubation period the latter developed the disease. A.B. was kept under observation for 28 days after inoculation and failed to develop any symptoms of measles.

5. Baby R. Age 2 months. Received 10 c.c. on third day of exposure.

This child was sent to hospital in company with an undoubted case of measles, as she was diagnosed erroneously to be in the prodromal stage of measles. She was suffering from stomatitis, had no pyrexia, and developed no rash. As there was exposure on the day of admission she was placed in the measles ward and received a prophylactic inoculation on the third day after admission. She was detained for 20 days subsequently in the ward and did not develop measles.

6. J.G. Age 4. Received 10 c.c. on third day after exposure.

7. K.S. Age 2.            „            „            „            „

8. J.G. Age 2.            „            „            „            „

These children were being treated in the bed isolation ward on account of a doubtful diagnosis of scarlet fever. Six days after inoculation another child who had been incubating the disease on admission developed measles, and 11 days later the sole remaining patient, who had not previously suffered from measles, contracted it. J.G. was under observation for 40 days after inoculation, K.S. for 51 days, and J.G. for 32 days. None of them developed measles.

9. T.G. Age 3 months. Received 10 c.c. on third day after exposure.

This infant had a skin condition which was erroneously diagnosed as measles and which took some weeks to clear up. He was admitted to the measles ward, and during a stay of 47 days failed to develop measles.

10. G.P. Age 5½ years. Received 10 c.c. on third day after exposure.

A case of measles developed in a diphtheria ward. A brother of this case and G.P. were the only contacts who had no history of having suffered from measles. The brother was not inoculated and the measles rash appeared on him on the fifteenth day after exposure. G.P. did not develop measles.

II. R.H. Age 6 months. Received 10 c.c. of convalescent serum.

This patient was suffering from laryngeal diphtheria, and was the most striking example of the protection afforded by the serum, inasmuch as the child occupied for 24 hours the same steam tent as another child who proved to be in the prodromal stage of measles. During a month's observation period R.H. failed to develop the symptoms of measles.

- 12. H.D. Age 4
- 13. F.R. Age 7.
- 14. F.D. Age 3½.
- 15. M.B. Age 2½.
- 16. E.I. Age 3½.

Received 10 c.c. of convalescent serum on the second day after exposure.

This was the first occasion on which an attempt was made to prevent further cross-infection of a scarlet fever ward in which a case of measles had occurred. All the other children in the ward gave a history of measles. None of these patients subsequently developed measles. It is interesting to note, however, that a second case developed 12 days after the first in a child who was stated to have had measles, and that after another period of about 12 days an adult with a similar history also developed the disease a few days after she had been discharged from hospital.

- 17. M.P. Age 2½. Received 10 c.c. two days after exposure to infection.
- 18. K.M. Age 3½.           ,,           ,,           ,,           ,,

These were the only patients in a diphtheria ward who had not had measles. K.M. had previously developed hydrocephalus, and died 13 days after exposure without evidence of measles. No further cases of measles occurred in the ward.

#### *Rash Extinction Test with Convalescent Serum.*

On the analogy of the Schultz Charlton rash extinction test in scarlet fever, a similar test may be performed in the case of measles. On account of the more fixed nature of the measles rash, the inoculation of serum into the skin must be performed as early as possible in the pre-eruptive stage. The use of the test in diagnosis is therefore limited. In an infectious diseases hospital it is comparatively easy to get cases of measles in the pre-eruptive stage, and experiment shows that blanching does take place, although it is not so striking a phenomenon as in the case of scarlet fever. It was found that the serum employed gave a definite inflammatory reaction, with a faint

surrounding zone of blanching, even when used in a dilution of one in ten. When the inflammatory reaction had subsided, in 24 to 48 hours, the blanching became much more evident. In measles cases, in whom marked staining followed the eruption, no staining occurred at the site of the skin inoculations.

#### *Conclusion.*

In his publications, Degkwitz reported that he had been able to protect from measles 85 per cent. of the children he had inoculated. An analysis of the cases treated at Monsall Hospital shows that 100 per cent. of the exposed children were protected. The numbers are small, but it must be noted that whereas Degkwitz, Park, and others gave doses of serum graduated according to age, the largest dose being 10 c.c., the routine procedure at Monsall Hospital has been to give 10 c.c. It will also be noted that no case was inoculated after the third day of exposure, a circumstance which undoubtedly contributed to the excellent results.

This investigation shows that in convalescent serum there is available an excellent prophylactic remedy for measles. It has been seen that it may be safely administered, and that it is almost certain in its effects. The great drawback appears to be the difficulty in obtaining a stock of convalescent serum, and this difficulty will always be present until such time as the causative organism of the disease is discovered beyond doubt, and when it may be possible to prepare serum from animals as in the case of other diseases.

## PNEUMONIA.

1927.

### (I) PRIMARY PNEUMONIA.

Of the 2,620 known primary pneumonia cases 2,531 were fully investigated, and of these 1,379 cases were classified as lobar pneumonia, 1,213 cases as lobular pneumonia, and 28 cases simply as pneumonia.

The case fatality among the investigated lobar pneumonia cases was 31.6 per cent., 43.9 per cent. among lobular pneumonia cases, and 44 per cent. among the unclassified cases.

The Health Visitors paid 8,813 visits in connection with cases suffering from all forms of pneumonia.

## (2) INFLUENZAL PNEUMONIA.

Of the 774 cases of influenzal pneumonia which came to our notice 735 cases were fully investigated, and of these 403 were males and 332 females.

The case fatality was 39·3 per cent.

## INFLUENZA.

926 cases of influenza other than influenzal pneumonia came to the notice of this department through the official death returns, the activities of the Health Visitors, and a few by notification from medical practitioners. The greatest number of cases occurred during February when 505 cases were recorded. 909 cases were investigated during the year.

The case fatality was 18·7 per cent.

The distribution according to sex of these investigated cases of influenzal pneumonia and of influenza is as follows :—

	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>
Cases .. . . . .	820	824	1,644
Deaths .. . . . .	244	215	459

The Health Visitors paid 2,196 visits in respect of influenza.

## SECONDARY PNEUMONIA.

203 cases of secondary pneumonia were notified during the year, and were associated with the following diseases :—

Measles .. . . . .	=	115 cases.
Whooping Cough .. . . . .	=	80 ,,
Measles and Whooping Cough ..	=	2 ,,
Other diseases .. . . . .	=	6 ,,
 Total .. . . . .	<hr/>	<hr/> <u>203</u>

The case fatality was 46·3 per cent.

With 16 exceptions the cases occurred among children under five years of age.

The cases being notified were investigated, although they are *not* notifiable under the Pneumonia, Malaria, and Dysentery Regulations of 1918.

THE KNOWLEDGE OF THIS SECTION OF THE PUBLIC HEALTH DEPARTMENT DURING 1927.  
THE TABLE ALSO SHOWS THE NUMBER OF NOTIFIED CASES, THE NUMBER OF CASES FULLY INVESTIGATED, AND THE TOTAL NUMBER OF KNOWN CASES.

	Notified Cases	Cases fully investigated	Cases not fully investigated	Total known Cases of Primary, Influenza, and Secondary Pneumonia occurring in 1926
(a) <i>Primary Pneumonia</i> —				
1. Number of primary pneumonia cases notified and fully investigated .. .. .. .. ..	2,186			
2. Number of primary pneumonia cases notified and not fully investigated .. .. .. .. ..	74			
3. Number of primary pneumonia deaths not previously notified but fully investigated .. .. .. .. ..	345			
4. Number of primary pneumonia deaths not previously notified and not fully investigated .. .. .. .. ..	15			
(b) <i>Influenza Pneumonia</i> —				
1. Number of influenza pneumonia cases notified and fully investigated .. .. .. .. ..	657			
2. Number of influenza pneumonia cases notified and not fully investigated .. .. .. .. ..	33			
3. Number of influenza pneumonia deaths not previously notified but fully investigated .. .. .. .. ..	78			
4. Number of influenza pneumonia deaths not previously notified and not fully investigated .. .. .. .. ..	6			
(c) <i>Secondary Pneumonia</i> —				
1. Number of secondary pneumonia cases notified and fully investigated .. .. .. .. ..	193			
2. Number of secondary pneumonia cases notified and not fully investigated .. .. .. .. ..	2			
3. Number of secondary pneumonia deaths not previously notified but fully investigated .. .. .. .. ..	8			
4. Number of secondary pneumonia deaths not previously notified and not fully investigated .. .. .. .. ..	0			
TOTALS .. .. .. .. ..	3,145	3,467	130	3,597

## STATEMENT OF WORK DONE BY THE HEALTH VISITORS.

The staff at the end of the year 1927 consisted of a Superintendent, an Assistant Superintendent, 55 Health Visitors, a Cleansing Nurse, and 8 Female Clerks.

The main features of the Health Visitors' work, as in previous years, included the visitation of infants in their homes from the time the attendance of the midwife or doctor ceases until the completion of the child's fifth year; the investigation of cases of measles, whooping cough, pneumonia, and influenza; and the investigation and following up of cases of scabies and vermin; and commencing in August, 1927, the investigation of still-births, other than those occurring in the practice of midwives, these latter being undertaken by the Superintendent of Midwives.

Table 1 shows the work done throughout the year in each district worked by the Health Visitors.

Table 2 compares the work of 1927 with that of the four preceding years.

### *Notification of Births Act.*

The decrease in the number of births has continued during the year, 13,082 births being registered in 1927, as compared with 13,957 for 1926.

The total number of notifications received in 1927 under the Notification of Births Act was 13,860, of which 4,815 were from doctors, 8,803 from midwives, and 242 from parents. Out of the total of 13,860, those occurring in the districts covered by the Health Visitors numbered 11,484. The registered births within the City numbered 13,082, and of these 11,389 were referred to the Health Visitors.

In addition to the above, in 1927 the Health Visitors "found" on their respective districts 156 children who were born during the current year, 205 who were born during 1926, 167 born during 1925, 96 born during 1924, and 35 born during 1923, thus adding a total of 659 new cases to be visited to those already distributed to them through the Notification of Births Act.

These cases were either removals into Manchester from other towns or removals from (at present) unvisited areas of the City.

### *Deaths.*

1,018 deaths of infants under one year of age occurred in the districts covered by the Health Visitors during 1927. Of these, 132 lived less than a day, 127 died over a day old and within a week, 151 died over a week old and within a month, 142 died over a month and under three months old, 177 over three months and under six months old, 138 over six months and under nine months old, and the remaining 151 between the ages of nine months and one year.

In 263 cases death was due to bronchitis and pneumonia, in 214 cases to prematurity, in 127 cases to enteritis, in 38 cases to debility and marasmus, in 53 cases to convulsions, in 17 cases to accidental deaths, including those due to want of attention at birth ; 7 cases died from tuberculosis, 8 from syphilis, 9 from influenza, 41 from whooping cough, 44 from measles, and the remaining 197 deaths were due to various other causes.

Table 3 shows the distribution of deaths, according to districts, of children under one year of age.

There were 372 deaths of children of one to two years of age during 1927 in the "visited" areas of the City.

In 160 cases death was due to bronchitis and pneumonia, 14 children died from enteritis, 1 from debility and marasmus, 6 from convulsions, 8 from accidental causes, 23 from tuberculosis, 8 from influenza, 61 from measles, 45 from whooping cough, 1 from syphilis, and 45 from various other causes.

Table 4 shows the distribution of deaths, according to districts, of children aged one to two years.

There were also 296 deaths of children of two to five years of age during 1927 in the "visited" areas of the City. Of these, 164 occurred in the third year, 78 in the fourth year, and 54 in the fifth year.

In 105 cases death was due to bronchitis and pneumonia, 8 children died from enteritis, nil from debility and marasmus, 4 from convulsions, 15 from accidental causes, 31 from tuberculosis, 8 from influenza, 45 from measles, 22 from whooping cough, nil from syphilis, and 58 from various other causes.

Table 4A shows the distribution of deaths, according to districts, of children aged two to five years.

#### *Summer Diarrhoea.*

From July 15th to September 30th, 1927, 194 cases of summer diarrhoea were visited. Of these, 30 occurred during the last two weeks in July, 86 during the month of August, and 78 during the month of September. These figures are lower than those for the preceding year, when 370 cases were visited.

112 of the total cases were children under twelve months, and of these 32 were having breast feeding, 14 mixed feeding, and 66 entirely artificial feeding at the onset of the illness.

38 cases died, though not all of the deaths were ascribed to diarrhoea ; 33 of the total deaths were those of children under one year of age, and of these 18 had not yet attained their fourth month.

45 cases were admitted to hospital.

The distribution of these cases is shown in Table 5.

### *Child Welfare Centres.*

Until December, 1927, the old method of co-operation between the Infant Welfare Centres and the Health Visitors continued. An alteration was then found to be desirable, and arrangements were made for the attendance of each Health Visitor during one session per week at the Infant Welfare Centre for her district, so far with very satisfactory results. A list of new attendances at each of the Infant Welfare Centres is sent in each week from each centre to the Public Health Office, and the date of the attendance and the name of the centre is entered on the infants' case sheet for the Health Visitors' information.

### *The Manchester Babies' Hospital.*

The 20 beds for children under one year, and the 10 beds reserved for cases of rickets, have been continuously occupied throughout the year, and there has usually been a waiting list.

During 1927, 118 applications were received for admission to the small beds in the hospital. Of these, 25 were cancelled for the following various reasons : 3 were admitted into private beds ; 8 were admitted to other hospitals ; 6 died before beds were available ; 4 so much improved whilst on the waiting list that hospital treatment was no longer necessary ; in 3 instances the parents at the last minute were unwilling to allow their children to go into hospital, and one was unable to be admitted because of an infectious condition. As before stated, these beds are reserved for children under one year of age. 93 cases were admitted to hospital.

Ninety-three cases admitted to the Babies' Hospital (small beds) from the following Child Welfare Centres :—

The various conditions from which the children were notified to be suffering were :—

	Cases		Cases
Malnutrition .. . . .	13	Pyloric Stenosis .. . . .	1
Atrophy .. . . .	11	Marasmus .. . . .	21
Dyspepsia .. . . .	21	Gastritis .. . . .	1
Rickets .. . . .	6	Vomiting .. . . .	1
Diarrhoea .. . . .	5	Prematurity .. . . .	7
Cleft Palate .. . . .	1	Debility .. . . .	1
Cerebral .. . . .	1	Not Thriving .. . . .	2
Improper Feeding .. . .	1		—
		Total .. . . . .	<u>93</u>

The ages of the infants on admission were :—

	Cases		Cases
Under 1 month .. . . .	3	Aged 7 months .. . . .	8
Aged 1 „ . . . .	7	„ 8 „ . . . .	3
„ 2 months .. . . .	14	„ 9 „ . . . .	1
„ 3 „ . . . .	13	„ 10 „ . . . .	8
„ 4 „ . . . .	10	„ 11 „ . . . .	6
„ 5 „ . . . .	10	Over 11 „ . . . .	3
„ 6 „ . . . .	7		—
		Total .. . . . .	<u>93</u>

The length of stay in hospital varied from one week to as much as 30 weeks. The average was about 9 weeks.

22 of the cases died in hospital and 10 have died since discharge. About 56 per cent. of the mothers attended the Infant Welfare Centres regularly after receiving their infants home again from hospital. The Health Visitors visit the children promptly as soon as the notification of discharge is received, and reports on the condition of discharged cases are sent to the hospital in May and in November each year. Attendance at a centre is always strongly urged. From the latest reports on the hospital cases, 53 were said to be in a satisfactory condition and 7 were unsatisfactory; 1 case has removed, and the Health Visitor has been unable to trace it; 1 case was still in hospital at the time of writing this report.

59 applications were received for admission to the "Rickets" beds during the year, and 53 children were admitted.

For the various following reasons the other 6 applications were cancelled :— 2 cases were admitted to other hospitals, 1 case was not admitted because of infectivity, and in 3 cases the parents eventually refused to part with the children and to allow them to go into hospital.

The 53 cases admitted were from the various Child Welfare Centres:-

4		72, Rosamond Street, C.-on-M.
12	I	Manipur Street, Openshaw
2		230, Hyde Road
5		93, Hamilton Street, Collyhurst
6		45, Higher Ardwick
8		135, Pollard Street, Ancoats
I		Abbey Hey Lane, Gorton
2		Cheetham Hill Road, Harpurhey
6		Public Health Office
2		686, Oldham Road, Newton
3		Elm Street
2		42, Lower Moss Lane, Hulme
		TOTAL
		53

The length of stay in hospital varied from 1 day to 23 weeks.

Of the 53 cases admitted, the latest reports with regard to those which were discharged state that 30 are now in a satisfactory condition, 15 are not yet very satisfactory, 1 case has removed from Manchester, 4 cases have died since discharge, and 3 cases are still in hospital. 60 per cent. of the cases have attended the centre since discharge from hospital.

### *Creche Ward, Monsall.*

This ward, which consists of 8 beds, is kept for the reception of children between the ages of 1 and 3 years suffering from rickets and malnutrition.

During 1927, 21 applications for admission to the Creche Ward were received, and 19 children were admitted. The remaining cases were not admitted because the parents refused the offer of hospital treatment.

The 19 cases admitted were from the following Child Welfare Centres :—

I	40, Lower Moss Lane, Hulme							
2	93, Hamilton Street, Collyhurst							
6	1, Manipur Street, Openshaw							
4	135, Pollard Street, Ancoats							
I	72, Rosamond Street West, C.-on-M.							
2	230, Hyde Road, West Gorton							
I	45, Higher Ardwick							
		Public Health Office						
		TOTAL						
		19						

Eighteen children were admitted suffering from rickets and 1 from malnutrition.

The length of stay in hospital varied from 1 week to 29 weeks.

All the 19 cases were discharged; none can be reported yet as quite satisfactory; 14 cases continue to improve, 3 remain still unsatisfactory, and 1 case has died since discharge.

Only 9 children attended the Infant Welfare Centre after their discharge.

## MEASLES, GERMAN MEASLES, WHOOPING COUGH, PNEUMONIA, AND INFLUENZA

### *Measles.*

An analysis of the 13,411 investigated cases is given below:—

	Nursed at Home		Removed to Hospitals		* Developed Measles whilst in Hospitals		Total Cases Investigated
	12,993		371		47		
	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	
Number of cases ...	12,680	313	251	120	24	23	13,411
Recovered ...	12,666	241	235	65	14	2	13,223
... ...	14	72	16	55	10	21	188
A fatality .	·11%	23%	6·37%	45·8%	41·6%	91·3%	1·4%

\* Patients in hospitals for other conditions developing measles.

The Health Visitors paid 29,407 visits in connection with the above measles cases during 1927.

*German Measles.*

Total number of German measles cases notified .. . . .	407
"    "    "    "    visited .. . . .	385
"    "    "    "    recovered .. . . .	383
"    "    "    "    died .. . . .	2

The number of visits paid by the Health Visitors in respect of German measles was .. . . . . . . . .	937
--	-----

*Whooping Cough.*

Whooping cough, a disease which is not generally notifiable by the medical profession, has since 1911 been included in a Local Act as one of three infectious diseases in which parents and guardians of school children must notify the head teacher of any child known or suspected to be suffering from this disease.

The information is passed on to the Medical Officer of Health by the Education Authorities.

Total number of cases notified .. . . . .	2,244
Total number of cases visited .. . . . .	2,206

An analysis of the 2,206 investigated cases is shown below:—

	Nursed at Home		Removed to Hospitals		* Developed Whooping Cough whilst in Hospitals		To Ca In tig
	2,096	88	22				
	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	
Number of cases ... ...	1,982	114	44	44	9	13	2,
Recovered ...	1,954	57	31	13	3	2	2,
Died ... ...	28	57	13	31	6	11	
Case fatality .	1·41%	50%	29·5%	70·4%	66·6%	84·6%	6

\* Patients in hospital for other conditions developing whooping cough.

The Health Visitors paid 6,783 visits in connection with the above whooping cough cases during 1927.

The distribution of measles, German measles, and whooping cough throughout the City during 1927, and the mortality therefrom, together with a report showing how the various age groups have been affected by measles, are to be found elsewhere. (See pages 45 to 50.)

#### *Pneumonia.*

A full report of the work done during 1927 with regard to pneumonia appears elsewhere. (See pages 141 to 143.)

In 1927, 3,145 notifications of pneumonia were received ; 2,260 referred to cases of primary pneumonia ; 690 to cases of influenzal pneumonia ; and 195 to cases of secondary pneumonia. Secondary pneumonia does not come under the Pneumonia, Malaria, and Dysentery Regulations of 1918, but, being notified, a record was kept of the cases and they were investigated.

In addition to the notified cases, 452 deaths from pneumonia, not previously notified, were brought to our notice from the death returns.

Of the 3,597 total known cases of pneumonia, 3,467 were fully investigated, and the Health Visitors paid 8,813 visits in connection with these investigations.

#### *Influenza.*

During 1927, 926 cases of influenza, other than influenzal pneumonia, were brought to the notice of the Department, and 909 were fully investigated by the Health Visitors, who paid 2,196 visits in connection with these cases.

#### *Relief.*

The grant (originally made in 1917) to supply milk to young children suffering from measles, whooping cough, pneumonia, etc., in families where the actual income was below the standard scale, was continued during the year 1927.

Throughout the year 496 applications for milk were granted and 7,882 pints of milk were given.

As in preceding years, we have endeavoured to use these grants of milk as a means towards the better nursing of young patients at home, and have insisted upon the necessary instructions given by the Health Visitors being carried out, as far as means would permit, wherever relief has been given.

#### *Verminous Work.*

During 1927 the number of notifications in respect of verminous cases received from the Education Authorities was 562. This number shows a considerable decrease as compared with 1926, when 916 notifications were received.

With regard to cases of scabies, 483 notifications of families thus affected were received from the Education Authorities, as compared with 229 in 1926.

The Cleansing Station was in use on 13 half days for the compulsory cleansing of school children throughout the year, and 43 children were cleansed. Of these, 2 had body vermin only, 13 had head vermin only, and 28 had body and head vermin. Nineteen other voluntary cleansings were also carried out at the Cleansing Station, the cases being too seriously infested to be dealt with satisfactorily in their own homes.

In addition to her work at the Cleansing Station and the clerical duties appertaining to this appointment, the Cleansing Nurse paid 710 visits to verminous cases and carried out cleansings of 113 children in their homes at the request of the parents during the year.

Although these "home cleansings" take much time, the results are sufficiently satisfactory to justify their continuance.

Where necessary the clothing and bedding have been stoved after these cleansings have been carried out.

Six families notified as verminous were prosecuted.

Seven cases of neglect were referred to the National Society for the Prevention of Cruelty to Children during the year, and visits from the Society's Officers have been helpful even without resorting to prosecution.

A summary of the work done by the Health Visitor appointed by the "Ladies' Society for Visiting the Jewish Poor," and whose work is subjected to the supervision of the Medical Officer of Health, is given in the following tables:—

*Work of the Jewish Health Visitor during the Year 1927.*

DISTRICT	HOUSE-TO-HOUSE INSPECTIONS							RE-INSPECTIONS			Primary Infants	Subsequent	Children from 1 to 5 years	Total Number of Visits	LINEWASHING
	Number of Visits	Overcrowdings	Disrepair	Dirty	Cellars Dirty or Dilapidated	Yards Defective	W.C.'s Defective	Referred to Sanitary Dept.	Number of Visits	Defects Remedied	New Complaints Referred				
Red Bank and Strangeways	570	..	139	..	..	..	..	170	178	122	150	240	2247	2235	5292

-HEALTH VISITORS' YEARLY SUMMARY-TOTALS FOR THE TWELVE MONTHS ENDING 31ST DECEMBER, 1927.

on there were 659 "Found Cases" to which "Primary" visits were paid.

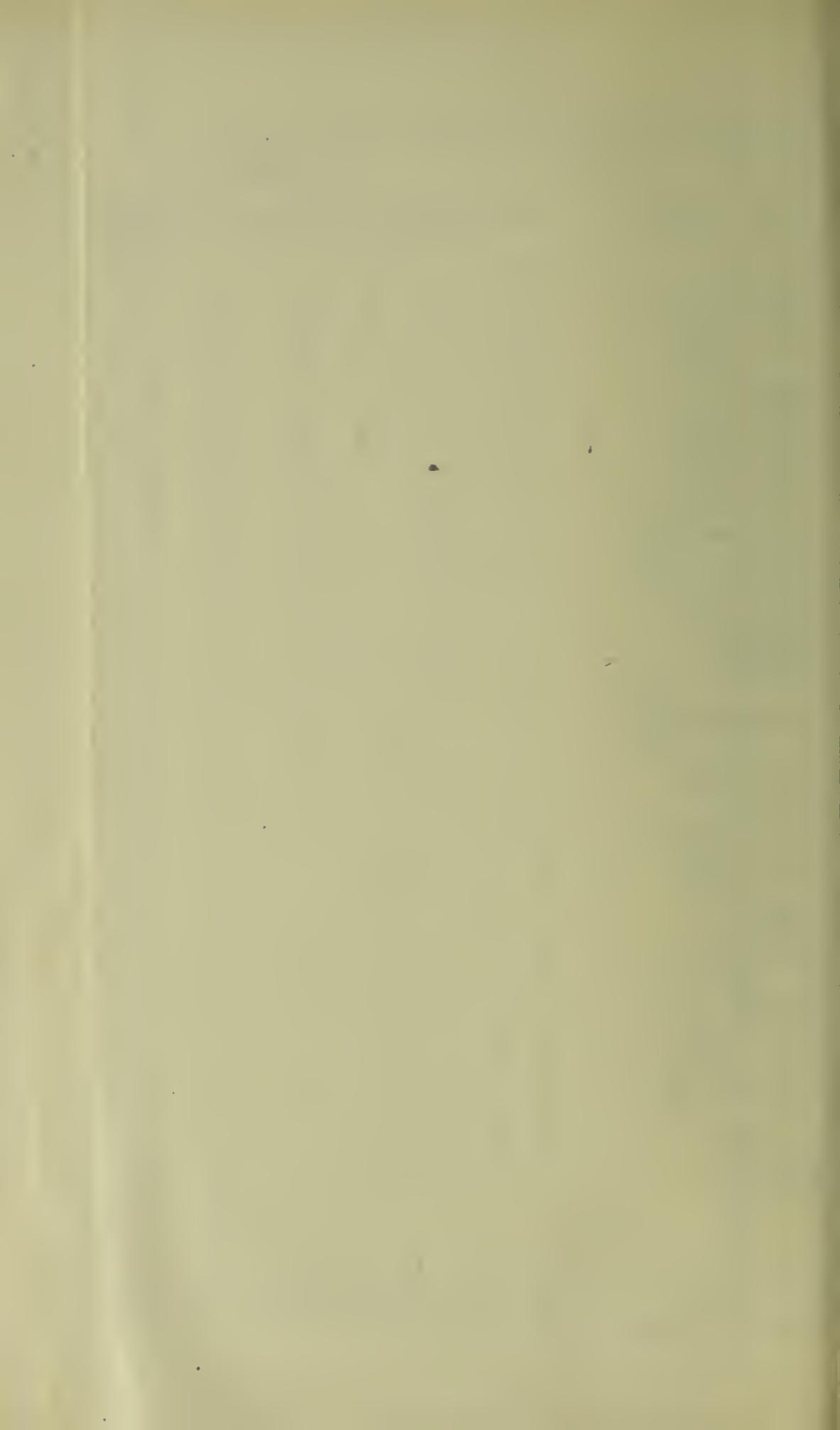


TABLE 2.

SHOWING THE WORK DONE BY THE HEALTH VISITORS DURING THE YEAR 1927  
AND COMPARING IT WITH THE WORK DONE IN 1923, 1924, 1925, AND 1926.

Classification of Visits	Number of Visits Paid in 1923	Number of Visits Paid in 1924	Number of Visits Paid in 1925	Number of Visits Paid in 1926	Number of Visits Paid in 1927
Initial visits to Infants .. .	14,901	13,928	13,260	13,159	12,067
Subsequent visits to Infants .. .	59,923	50,965	53,226	56,606	64,239
Subsequent visits to Children over one year of age and under 5 years	129,523	132,254	140,850	144,597	162,357
Initial visits <i>re</i> Infants and Young Children	424	345	317	308	334
Special visits <i>re</i> Sanitary Defects ..	2,161	1,551	1,147	715	870
Visits <i>re</i> Limewashing .. .	2,648	1,752	1,732	732	..
Initial visits to Verminous Cases (including Scabies)	550	470	652	739	612
Subsequent visits to Verminous Cases	2,066	1,663	1,652	1,760	1,976
Measles Investigations .. .	3,360	16,187	7,306	10,733	12,951
Subsequent visits .. .	6,064	23,464	8,849	17,835	16,456
Initial Measles Investigations ..	83	83	1,820	895	378
Subsequent visits .. .	109	84	2,288	1,136	559
Whooping Cough Investigations ..	3,629	1,712	3,196	2,129	2,204
Subsequent visits .. .	5,685	2,652	5,679	3,670	4,579
Visits <i>re</i> Relief .. .	280	267	153	137	101
Visits <i>re</i> Influenza .. .	889	713	932	502	2,196
Visits <i>re</i> Pneumonia .. .	6,949	7,727	7,246	6,695	8,814
Successful Visits .. .	5,716	3,886	2,138	2,163	1,907
Post-Birth Investigations ..	....	....	....	....	68
Total visits .. .	244,960	259,703	252,443	264,511	292,668
Number of Health Visitors .. .	52 (4 Health Visitors doing only Measles, Whooping Cough, and Pneumonia Cases)	52 (4 Health Visitors doing only Measles, Whooping Cough, and Pneumonia Cases)	53 (4 Health Visitors doing only Measles, Whooping Cough, and Pneumonia Cases)	55 (4 Health Visitors doing only Measles, Whooping Cough, and Pneumonia Cases)	55 (4 Health Visitors doing only Measles, Whooping Cough, and Pneumonia Cases)
Number of Districts worked .. .	48	48 (4 temporary Measles Visitors also worked for four months)	49 (4 temporary Measles Visitors also worked for four months)	51 (2 temporary Measles Visitors worked for seven months and 1 for three months)	51 (1 temporary Measles Visitor also worked for one month)

TABLE 3.

## CAUSES OF DEATH—1927. CHILDREN UNDER 12 MONTHS.

CAUSES OF DEATH—1927. CHILDREN ONE TO TWO YEARS.

WARD	Number of Health Visitors of Working Age in the District	Number of Children 1 to 2 years of age among Children died	Other Causes									
			Bronchitis Pneumonia	Debility Marsasmus	Inertia	Coryzal	Tuberculosis	Syphilis	Accidental Deaths	Influenza	Measles	Whooping Cough
All Saints ..	2	17	5	12	1	1	1	1	1	1	5	1
Ardwick ..	3	18	16	16	1	1	1	1	1	1	2	2
Beswick ..	2	16	10	4	1	1	1	1	1	1	4	1
Blackley ..	1	1	4	2	1	1	1	1	1	1	1	1
Bradford ..	2	13	7	2	2	1	1	1	2	3	3	1
Chorlton-cum-Hardy ..	1	2	1	1	1	1	1	1	1	1	1	1
Collyhurst ..	3	25	9	12	1	1	1	1	1	1	8	5
Didsbury ..	2	12	6	2	1	1	1	1	1	1	1	1
Gorton North ..	2	12	2	1	1	1	1	1	1	1	1	1
Gorton South ..	2	7	3	1	1	1	1	1	1	1	1	1
Harrowby ..	1	2	1	1	1	1	1	1	1	1	1	1
Levenshulme ..	2	1	4	2	1	1	1	1	1	1	1	1
Longsight ..	1	4	2	8	3	1	1	1	1	1	1	1
Medlock Street ..	3	20	8	3	1	1	1	1	1	1	1	1
Miles Platting ..	3	37	19	1	1	1	1	1	1	1	1	1
Moston ..	1	4	3	1	1	1	1	1	1	1	1	1
Moss Side East ..	1	3	1	2	1	1	1	1	1	1	1	1
Moss Side West ..	1	2	1	1	1	1	1	1	1	1	1	1
New Cross ..	3	40	21	8	2	1	1	1	1	1	1	1
Newton Heath ..	2	8	3	1	1	1	1	1	1	1	1	1
Openshaw ..	1	11	7	1	1	1	1	1	1	1	1	1
Rusholme ..	1	1	1	1	1	1	1	1	1	1	1	1
St. Clement's ..	1	17	6	1	1	1	1	1	1	1	1	1
St. George's ..	2	21	7	1	1	1	1	1	1	1	1	1
St. John's ..	1	1	1	1	1	1	1	1	1	1	1	1
St. Luke's ..	2	17	4	1	1	1	1	1	1	1	1	1
St. Mark's ..	2	21	5	1	1	1	1	1	1	1	1	1
St. Michael's ..	2	27	12	2	1	1	1	1	1	1	1	1
Withington ..	1	8	5	1	1	1	1	1	1	1	1	1
District I. ..	1	8	3	1	1	1	1	1	1	1	1	1
District II. ..	1	8	3	1	1	1	1	1	1	1	1	2
Total .. ..	51	372	160	1	14	6	23	1	8	8	61	45

TABLE 4A.

CAUSES OF DEATH—1927. CHILDREN TWO TO FIVE YEARS.

TABLE 5.—SUMMER DIARRHŒA. CASES VISITED BY THE HEALTH VISITORS, 1927 (CHILDREN UNDER 5 YEARS), COMPARED WITH THOSE VISITED DURING THE PRECEDING YEARS 1925 AND 1926.

		Year		
		1925	1926	1927
Total number of cases visited . . . . .		425	370	194
Number of cases occurring in—				
July (15th-31st) . . . . .		58	53	30
August . . . . .		248	155	86
September . . . . .		119	162	78
	Cases in Wards.			
All Saints . . . . .		18	12	6
Ardwick . . . . .		13	21	12
Beswick . . . . .		29	24	13
Blackley . . . . .		..	2	1
Bradford . . . . .		26	15	6
Collyhurst . . . . .		16	13	7
Gorton North . . . . .		41	6	6
Gorton South . . . . .		13	5	8
Harrowhey . . . . .		4	6	5
Levenshulme . . . . .		..	4	8
Longsight . . . . .		4	2	..
Medlock Street . . . . .		20	27	14
Miles Platting . . . . .		26	10	3
Moston . . . . .		1	5	8
Moss Side East . . . . .		6	5	5
Moss Side West . . . . .		2	7	5
New Cross . . . . .		52	51	19
Newton Heath . . . . .		..	5	1
Openshaw . . . . .		8	4	1
Rusholme . . . . .		10	19	11
St. Clement's . . . . .		9	14	2
St. George's . . . . .		43	34	14
St. John's . . . . .		10	14	12
St. Luke's . . . . .		18	10	5
St. Mark's . . . . .		21	16	6
St. Michael's . . . . .		19	10	6
Withington, Didsbury, and Chorlton-cum-Hardy . . .		5	5	2
Districts I. and II. . . . .		11	24	8
Number affected under 1 year of age . . . . .		224	194	112
Method of feeding at onset of illness—				
Breast . . . . .		53	38	32
Mixed . . . . .		25	17	14
Hand . . . . .		146	139	66
Deaths—				
Total number . . . . .		72	69	38
Number under 1 year of age . . . . .		61	59	33
Number under 4 months of age . . . . .		24	25	18

**REPORT ON THE WORK OF THE MIDWIVES'  
DEPARTMENT FOR THE YEAR 1927.**

By DR. NORA SMITH.

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**INSPECTION OF MIDWIVES.**

Under the direction of Dr. Nora Smith the inspection of midwives has been carried on by Miss A. Austin, assisted by Miss G. Treloar.

Year	No. of Midwives who notified intention to practice	No. of Midwives who				No. of Births attended by Midwives	No. of Births registered	% attended by Midwives	
		No. practising in City but resident outside	Died	Removed from Area	Gave up work				
1927	208	29	1	10	2	0	7,095	13,082	54
1926      1927									
No. of visits paid	...	...	...	...	...	...	916	1,183	
,, midwives interviewed at office	..	..	..	..	..	..	310	320	
,, houses found unsatisfactory	..	..	..	..	..	..	2	3	
,, bags found unsatisfactory	..	..	..	..	..	..	10	4	
,, Registers found unsatisfactory	..	..	..	..	..	..	14	5	

### PUERPERAL FEVER AND PYREXIA.

*Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926.*

This regulation provided for a second medical opinion in doubtful cases. The Public Health Committee agreed to pay a sum of £3 3s. for each consultation, provided that the consultants recognised for such provision should be only those who are on the gynaecological staffs of the Manchester Royal Infirmary, Manchester Northern Hospital, or St. Mary's Hospital.

In connection with the above provision, 12 applications for payment of fee were received up to March 31st, 1928 :—

	f. s. d.
Amount of fees paid .. .. .. .. .. .. .. .. .. .. .. ..	37 16 0
Amount recovered from people who were in a position to pay	7 17 6

### STILL-BIRTHS.

	No. reported	No. in practice of		Percentage to Total Births
		Doctors and Institutions	Midwives	
1926 .. .. .. .. .. ..	477	290	187	3·6
1927 .. .. .. .. .. ..	384	217	167	2·9

During the year 1927, 107 cases of puerperal fever were notified and 102 cases of puerperal pyrexia. In 28 of these latter the diagnosis was altered to puerperal fever, making a total of 135 puerperal fever and 74 of puerperal pyrexia. The corresponding average for the last 22 years (1905-1926) is 141, but the figures are not quite comparable, as the new regulations came into force in October, 1926. Of the 135 cases of puerperal fever, 33 occurred after abortion or premature labour. Of the abortions, 26 were at the second or third month of gestation, 4 at the fourth month, 2 at the sixth, and 1 at the seventh month of pregnancy.

The total fatal cases numbered 22, of which 4 were cases of abortion, as against an average of 28 in the 22 years 1905-26. Included in this total are 8 cases from outside districts which were delivered in hospital. One of these cases proved fatal.

The attack-rate per 1,000 births was 10.32, against 12.83 in 1926, whilst the case fatality per cent. was 16.4, against 19.9, the average for the 21 years 1905-26.

The mortality from puerperal fever per 1,000 births was 1.60, against an average of 1.61 in the preceding 10 years.

Table relating to the cases of puerperal fever attended either by midwives or doctors during 1927, as compared with the average of the 22 years, 1905-26:—

Years	Number of Cases attended by					
	Midwives		Doctors and Institutions		Midwife and Doctor	
	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths
1905-26 (Mean)	41	6	82	18	18	4
1927 ... ... ...	33	3	89	17	13	2

Out of 135 cases notified during 1927, 19 patients were nursed at home and all recovered. 92 cases were removed to Monsall Hospital and 82 recovered.

The remaining 24 cases were treated in other institutions and 12 recovered.

In 1927, subsequent visits have been paid to 90 women and 75 were found to be in good health. In 2 instances the mothers were found to be again pregnant.

The particulars as to the character of the labour, and the results for 1927, are:—

		Number of Cases	Recovery	Death
Normal full-term labour	... ... ... ..	65	57	8
Abnormal full-term labour	... ... ..	37	27	10
Abortion or premature	... ... ... ..	33	29	4

This number includes 8 cases from outside districts which were delivered in hospital, having been sent in owing to some abnormal condition of pregnancy or labour.

## PUERPERAL PYREXIA.

Of the 74 cases of puerperal pyrexia, 2 occurred after abortion at the second month of gestation; 27 patients were nursed at home and 25 recovered. The cause of death in 1 case was pneumonia, and in the other myocarditis. Seventeen cases were removed to Monsall Hospital and recovered. The remaining 30 cases were treated in other institutions; 29 recovered and 1 died. The cause of death was due to pneumonia.

TABLE RELATING TO CASES OF PUERPERAL PYREXIA ATTENDED EITHER BY  
MIDWIVES OR DOCTORS FROM JANUARY TO DECEMBER, 1927.

Number of Cases attended by						Institution Cases	
Midwives		Doctors		Midwife and Doctor			
Attacks	Deaths	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths
15	..	22	1	7	..	30	2

The particulars as to the character of labour, and the results, are:—

					Number of Cases	Recovery	Death
Normal full-term labour	..	..	..	..	43	43	..
Abnormal full-term labour	..	..	..	..	29	26	3
Abortion or premature	..	..	..	..	2	2	..

This number includes 6 cases from outside districts, which were delivered in hospital, having been sent in owing to some abnormal condition of pregnancy or labour.

Subsequent visits have been paid to 46 women and 37 were found to be in good health, a history of pregnancy being reported in 2 cases.

### PEMPHIGUS NEONATORUM.

In September, 1925, the Manchester City Council made an order declaring pemphigus neonatorum to be a notifiable disease under the Infectious Disease (Notification) Act, 1889, for a period of six months as from September 10th, 1925.

A renewal of the order was made on March 10th, and June 30th, 1926, and July 1st, 1927, for a further period of 12 months.

During the year 1927, 116 cases of pemphigus neonatorum were reported, 39 of these cases being infants under 11 days old. The remainder occurred at the following ages :—26 at 2 weeks, 22 at 3 weeks, 12 at 4 weeks, and 17 under 3 months. The total fatal cases were 7.

Ninety-five of these cases were nursed by the Special Nurses.

The following table shows the number of cases of pemphigus neonatorum occurring in the practice of midwives, doctors, and institutions :—

Year	Midwives		Doctors		Midwives and Doctors		Institutions	
	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths
1927	63	2	18	2	10	0	25	3

Out of 116 cases reported, 95 were of a mild character. In 85 of these cases the skin condition became normal in a period ranging from 4 to 10 days, and in 10 cases the condition cleared in a period of 3 weeks. In practically all these cases the lesions were small and were confined chiefly to the site of the first spots. Four of these cases, although the pemphigus condition was slight, developed a secondary condition of furunculous, and necessitated visiting for a longer period. Of the remaining 21 cases, in 10 instances the lesions, though small and superficial, spread to other parts of the body, but all made a good recovery.

Three cases occurring in midwives' practices were of a severe type, 2 cases proving fatal.

Two deaths occurred in the practices of doctors. In both cases the infant died before notification was received.

Four deaths occurred in institutions.

In 3 cases full particulars were unobtainable.

### MATERNAL DEATHS.

During the year 1927, 51 maternal deaths from causes other than puerperal sepsis were reported. The causes given are set out in the following table :—

Dystocia (contracted pelvis) .. . . . .	I	Ruptured ectopic gestation .. . . . .	3
Eclamptic conditions .. . . . .	II	Pelvic abscess .. . . . .	1
Hæmorrhage (hydatidoform mole) .. . . . .	I	Pneumonia .. . . . .	4
Ante-partum hæmorrhage .. . . . .	8	Complicated labour .. . . . .	1
Pulmonary embolism .. . . . .	8	Erysipelas .. . . . .	1
Cerebral embolism .. . . . .	I	Cardiac conditions .. . . . .	6
Post-partum hæmorrhage .. . . . .	4	Peritonitis (following abortion). . . . .	1

Careful investigation was made into the circumstances relating to the deaths of the above cases.

### SUSPENSION OF MIDWIVES.

During 1927, 149 suspensions of midwives from their work occurred, chiefly on account of their having been in attendance on cases of puerperal infection or other septic conditions.

### COMPENSATION TO MIDWIVES DURING SUSPENSION.

Section 2 (1) of the Midwives and Maternity Homes Act, 1926, gives a midwife who is suspended from practice in order to prevent the spread of infection, a right to recover reasonable compensation from the local authority.

During the year 1927, 4 claims were received. The total amount of compensation paid was £3 7s. 6d.

This provision appears to have been helpful in encouraging midwives to notify at once any slight condition which might render them liable to be a source of infection.

### RECORDS OF CALLING IN MEDICAL AID.

During the year 1927 the number of medical records received was 3,492, as compared with 3,672 in the previous year. The numbers under the various reasons given for having advised medical aid correspond to those in previous years (see page 164).

NUMBER OF CASES OCCURRING IN 1927 IN WHICH THE MIDWIFE ADVISED THAT A REGISTERED MEDICAL PRACTITIONER SHOULD BE SENT FOR (RULE E). ALSO THE NUMBER OF APPLICATIONS FROM MEDICAL PRACTITIONERS FOR PAYMENT OF THEIR FEES FOR ATTENDING CERTAIN EMERGENCY CASES.

Period	Medical aid called in on account of the following causes, as stated by the Midwife	Total	*Application for Fees
Pregnancy	Vaginal discharge .....	42	..
	Puffiness of hands, face, etc. ....	31	..
	Excessive sickness .....	34	..
	Abortions, miscarriages .....	22	12
	Deformed pelvis .....	5	3
	Loss of blood .....	81	6
	Dangerous varicose veins .....	27	..
Labour	Other unusual features of pregnancy .....	275	58
	Presentations	Head—Malpositions .....	29
		{ In primiparæ .....	6
		{ In multiparæ .....	1
		{ Para not stated .....	38
		Transverse .....	4
		Funis .....	15
	Tedious labour	Unable to make out .....	11
		Footling .....	11
		Hand .....	11
	Placenta	Foreeps used .....	1
		No record as to forceps .....	553
		{ Retained .....	44
Lying-in	Adherent .....	14	13
	{ Prævia .....	10	
	Membranes retained .....	21	7
	Rupture of perineum .....	735	358
	Haemorrhage	{ Ante partum .....	32
		{ Post partum .....	57
		{ Haemorrhage—3rd stage .....	1
		{ Accidental .....	..
	Convulsions .....	2	..
	Complications .....	59	37
	Premature labour .....	14	4
Newly-born Child	Secondary post-partum haemorrhage	0	..
		1	..
		62	17
		15	5
	Progress unsatisfactory or complications .....	256	81
<hr/>			
TODAY	Injuries received during birth .....	5	2
	Obvious malformations .....	64	14
	Tongue-tied .....	77	16
	Feebleness of child .....	85	54
	Inflammation of eyes and eyelids .....	344	114
	Skin eruption .....	32	12
	Illness from prematurity .....	73	21
	Jaundice .....	37	17
	Inflammation about the umbilicus .....	10	10
	Unspecified or complications .....	206	34
	Convulsions .....	22	6
<hr/>			
TOTALS.....		3,492	1,459

\* These applications have been classified according to the conditions requiring treatment found by the medical practitioner.

In addition to the above cases referred to medical practitioners, 299 cases were referred to the pre-maternity clinics by midwives.

MIDWIVES ACT, 1918—MEDICAL ASSISTANCE TO MIDWIFE  
IN CASE OF EMERGENCY.

Under Section 14 (1) of this Act a midwife is required, in case of any emergency as defined in the rules, to call in to her assistance a registered medical practitioner, and the local supervising authority is required to pay such medical practitioner a fee as prescribed by the Ministry of Health. The local supervising authority has power to recover the fee from the patient or husband unless they are unable, by reason of poverty, to pay such fee.

Particulars of applications from medical practitioners for the payment of their fees :—

	1926	1927
No. of families whose incomes were below the scale .. . . . .	506	419
No. of families whose incomes were above the scale .. . . . .	946	886
No. of families who paid doctor themselves ..	36	36
Conditions not fulfilled .. . . . .	55	21
No account sent (see Ophthalmia Neonatorum Regulations, 1926) .. . . . .	..	97
No. paid by Local Supervising Authority ..	1,452	1,459
Amount of fees paid .. . . . .	£ s. d.	£ s. d.
	1,625 8 6	1,612 16 6
Amount recovered from people who were in a position to pay .. . . . .	447 5 11	539 0 7

The summary of causes to which it seemed reasonable to credit the still-births occurring in the practices of midwives, shows the principal numbers to be :—

		1926	1927
Definite history of ill-health of the mother	.. ..	43	20
Hydraminos	.. .. .. .. .. .. .. ..	20	4
Congenital deformities	.. .. .. .. .. .. .. ..	15	10
Toxæmia of pregnancy	.. .. .. .. .. .. .. ..	..	6
Breech presentations, full time and premature	.. ..	16	16
Elderly parents	.. .. .. .. .. .. .. ..	..	15
Ante-partum hæmorrhage	.. .. .. .. .. .. .. ..	4	7
Probable specific disease from family history	.. ..	4	4
Twin pregnancies—full time and premature	.. ..	13	6
Abnormal presentations	.. .. .. .. .. .. .. ..	8	..
Miscellaneous causes	.. .. .. .. .. .. .. ..	5	15

In 1927 the still-birth rate was highest in Gorton, Bradford, Harpurhey, and Hulme. Subsequent visits were paid to 88 of these cases after a period of 6 months following confinement. In 80 instances the health of the mother was found to be good, 4 mothers being again pregnant.

## DEATHS OF NEW-BORN CHILDREN.

During 1927, 127 deaths of newly-born infants occurring in the practices of midwives were notified, in accordance with Rule E 22 (b) of the Central Midwives Board. Of these, 13 occurred before a medical practitioner could be obtained.

In 7 instances inquests were held. In 1 case "want of attention at birth" was the verdict, 1 asphyxia, 4 natural causes, and 1 accidental suffocation. In 6 cases the City Coroner did not consider it necessary to hold inquests.

## CHARGES OF MALPRACTICE, NEGLIGENCE, OR MISCONDUCT.

During the year 1927 it was not necessary to summon any midwife to appear before the Maternity and Child Welfare Sub-Committee on charges of negligence or misconduct.

## POST-GRADUATE INSTRUCTION FOR MIDWIVES.

In January, 1927, arrangements were made with the medical staff of St. Mary's Hospital, Manchester, for a post-graduate course of instruction to be given to midwives. The course was well attended and greatly appreciated.

A further course in conjunction with the Health Department is under consideration for 1928.

During the winter, lectures were given at the Public Health Office by the Medical Officer of Health and recognised specialists in the subjects dealt with. The interest and appreciation of the lectures was shown by the excellent attendance of midwives on each occasion. 101 midwives attended the first lecture, and 94 were present at the second.

## WORK OF THE SPECIAL NURSES.

The work done by the nurses during the year 1927 has been tabulated, and is as follows:—

	1926	1927
Still-births investigated . . . . .	174	197
Deaths of newly-born infants investigated . . . . .	5	11
Cases of Puerperal Fever nursed at home . . . . .	11	25
Nursing visits paid to Puerperal Fever cases and to patients with raised temperatures . . . . .	549	613
Visits to old Puerperal Fever and Pyrexia cases to ascertain subsequent histories . . . . .	302	230
New Puerperal Fever cases investigated to ascertain histories	84	95
Investigation visits paid to notified cases of Puerperal Pyrexia . . . . .	12	74
Nursing visits paid to 27 of these cases . . . . .	87	231
Nursing visits paid to cases of Mammary Abscess and Mastitis . . . . .	244	138
Nursing visits paid to cases of Phlebitis . . . . .	46	105
Nursing visits paid to cases of Phlegmasia Alba Dolens.	61	151
Carried forward . . . . .	<u>1,575</u>	<u>1,870</u>

## WORK OF THE SPECIAL NURSES—continued

	1926	1927
Brought forward .. . . .	1,575	1,870
Nursing visits paid to cases of Pneumonia and other chest affections .. . . . .	53	100
Nursing visits paid to cases on account of houses infected with Chicken Pox .. . . . .	70	18
Nursing visits paid to cases of house infected with Erysipelas ..	..	5
Nursing visits paid to cases of houses infected with Scarlet Fever .. . . . .	5	17
Nursing visits paid to cases of houses infected with Diphtheria .. . . . .	16	21
Nursing visits paid to cases of houses infected with Measles ..	66	28
Nursing visits paid to cases owing to septic skin condition of mother .. . . . .	..	35
Number of cases of Pemphigus Neonatorum and other skin affection in newly-born infants .. . . . .	239	167
Nursing visits paid to these infants .. . . . .	1,825	969
Number of nursing visits paid to cases of Spina Bifida ..	54	109
Number of nursing visits paid to cases of Septic and unsatisfactory Umbilicus .. . . . .	918	731
Number of nursing visits paid to cases of Ophthalmia Neonatorum .. . . . .	89	14
Number of nursing visits paid to cases of unsatisfactory conditions of Perineum .. . . . .	28	28
Subsequent visits to cases of Stillbirth to ascertain the present health of the mother .. . . . .	..	115
Special investigation visits concerning medical records and payment of medical fees .. . . . .	448	528
Special visits to infants on account of unsatisfactory conditions .. . . . .	..	254
Special investigations into maternal deaths .. . . . .	47	49
Unclassified nursing visits paid to mothers and infants ..	230	219
	<hr/> <u>5,663</u>	<hr/> <u>5,277</u>

### CHILD WELFARE CENTRES.

The table on page 170 shows in statistical form the work done at the Child Welfare Centres during the year 1927. The corresponding figures for the year 1926 are given for comparison. The attendances at the Ante-natal Clinics have increased from 1,786 in 1926 to 2,746 in 1927.

On July 1st the City Council took over from the Schools for Mothers the Rusholme Centre at Platt Parish Hall, and the Levenshulme Centre at St. Peter's Schools. The table therefore gives the work of these centres for the last half-year. The good relations existing between the Schools for Mothers and the Maternity and Child Welfare Committee have continued.

In September, 1927, the sale of accouchement outfits was commenced. These outfits are sold at cost price, *i.e.*, 6s. 2d. each, and can be obtained at the Public Health Office and at the Child Welfare Centres.

Mothers attending the Child Welfare Centres, by paying a small weekly sum, are able to obtain an outfit on the completion of the payment of the total cost. Up to December 31st, 19 outfit have been sold.

### ARTIFICIAL SUNLIGHT TREATMENT.

The artificial sunlight lamps at Ardwick and Cheetham have been in use during the whole year. The Medical Officer of Health reports that 324 children and 139 adults were treated at the Sunlight Centres at Cheetham Hill and Higher Ardwick during 1927, the lamps used being the quartz mercury vapour. General irradiations only were given. Various types of cases were treated, including debility and rickets, metabolic diseases and nervous diseases, and all cases were recommended for treatment by the Medical Officers in charge of the Welfare Centres. Results on the whole were most satisfactory and encouraging, and the treatment was found to be particularly valuable last winter in the convalescence of those children who were in a very debilitated condition following measles, pneumonia, and whooping cough. Adults referred for treatment included nursing mothers whose breast milk was beginning to fail, and the results here were found to be satisfactory in almost 50 per cent. of the cases. Expectant mothers were also treated for various disorders arising from their condition, and especially for nervous conditions. The results in practically all these cases were very satisfactory, a definite alteration in the condition of the patient being produced after a very short course of treatment.

STATEMENT OF WORK DONE AT THE CHILD WELFARE CENTRES DURING THE YEAR 1927 COMPARED WITH THE YEAR 1926.

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STATEMENT SHOWING NUMBER OF CASES RECEIVING MILK, AMOUNT SOLD, COST, AND MODE OF DISTRIBUTION.

	Number of New Cases put on Milk		Attendances of persons for Milk		Amount of Milk being Sold (Pints or Lbs.)		Total Cost to Corporation		Fresh and Dried Milk		Total	
	Fresh Milk	Dried Milk	Fresh Milk	Dried Milk	Fresh Milk	Dried Milk	Fresh Milk	Dried Milk	£ s. d.	£ s. d.		
70-72, Rosamond Street West .. { 1926.. 1927..	210 231	119 128	4,118 4,423	3,284 3,457	29,255 30,985	3,506 3,751	236 256	13 21	171 177	0 8	408 433	10 7
1-3, Manipur Street .. .. { 1926.. 1927..	401 358	271 169	8,727 7,651	6,866 5,286	61,287 53,584	7,469 4,514	494 451	13 4	346 249	7 2	841 700	0 12
153, Cheetham Hill Road .. .. { 1926.. 1927..	72 128	47 46	1,917 2,817	815 744	13,505 20,715	948 846	120 201	16 3	51 43	7 12	172 244	1 16
135, Pollard Street .. .. { 1926.. 1927..	277 177	163 147	4,668 4,342	4,347 3,535	32,726 30,731	4,634 3,914	232 246	0 11	217 174	0 17	449 421	0 8
93, Hamilton Street.. .. { 1926.. 1927..	240 221	213 146	5,935 5,280	5,968 5,374	41,752 37,077	6,204 5,737	356 326	5 9	315 257	13 8	671 613	18 0
230, Hyde Road, West Gorton .. { 1926.. 1927..	296 213	221 123	6,895 5,257	4,496 4,930	48,341 36,949	4,570 5,436	391 313	4 7	220 251	10 15	611 565	14 2
40-42, Lower Moss Lane .. .. { 1926.. 1927..	184 202	84 104	3,117 3,901	2,495 2,121	22,053 27,475	2,704 2,463	182 242	12 19	135 124	5 8	317 367	17 7
45, Higher Ardwick .. .. { 1926.. 1927..	274 215	134 97	7,990 7,085	4,781 4,786	56,448 49,922	5,064 5,183	439 415	3 5	240 242	15 10	679 627	19 2
Jubilee Schools, Harpurhey .. .. { 1926.. 1927..	89 136	71 73	2,060 2,709	1,445 1,829	14,966 19,522	1,480 2,052	126 176	10 3	70 98	18 5	197 275	9 11
686-8, Oldham Road, Newton .. { 1926.. 1927..	139 114	101 79	1,868 2,057	2,091 1,067	13,157 14,471	2,354 1,487	103 124	7 0	108 62	14 3	212 185	2 4
Abbey Hey Lane .. .. { 1926.. 1927..	35 31	35 21	1,562 1,329	1,185 840	11,004 9,317	1,386 938	76 70	17 12	64 34	15 6	141 104	12 18
Elm Street School .. .. { 1926.. 1927..	64 61	79 57	951 1,589	1,478 1,395	6,658 11,522	1,582 1,676	59 96	13 9	71 78	12 19	131 175	5 8
Didsbury .. .. { 1926.. 1927..	10 5	.. ..	.. ..	.. ..	2,527 1,959	.. ..	23 16	19 2	.. ..	.. ..	23 16	1 0
Chorlton-cum-Hardy.. .. { 1926.. 1927..	32 44	2 8	958 1,066	94 85	6,751 7,623	94 87	48 62	1 14	4 3	15 11	52 66	6 1
Levenshulme .. .. { 1926.. 1927..	74 92	24 18	1,924 2,492	691 670	13,604 17,822	753 728	108 157	9 2	36 35	11 13	145 193	0 1
Total .. .. .. { 1926.. 1927..	2,397 22,31	1,564 1,206	53,061 52,240	40,036 36,117	42,748 36,574	3,000 3,157	7 6	9 10	2,056 1,664	0 0	5,056 5,021	7 5

### MATERNITY HOMES AND HOSPITALS.

Under the Manchester Corporation (General Powers) Act, 1921, provision has been made for the registration of maternity homes, and bye-laws have been made in accordance with Section 53 of the Act. The bye-laws were given in detail on pages 175-176 of the Annual Report for the year 1921.

During the year 1927 8 applications for registration were received. Of these 2 were registered, 1 was refused on the grounds of unsuitability of premises and equipment, 2 were withdrawn, and 3 were held in abeyance.

In connection with 13 houses reported to have received maternity cases without having been registered for the purpose cautionary letters were sent by the Town Clerk in 8 instances, and no action was found to be necessary in the remaining 5 cases.

Since the Act came into force 31 homes have been registered and 10 discontinued for various reasons, leaving 21 homes on the register at the end of the year.

### SUBSIDISATION OF MATERNITY BEDS.

The 6 beds which have been subsidised at the Crumpsall Auxiliary Hospital since 1924 were given up on May 3rd of this year owing to the very small demand for them.

From January to May 5 patients only were admitted for confinement.

The question of subsidising Maternity Beds in other institutions is under consideration. It is suggested that these should be distributed to institutions in different parts of the City.

### SUMMARY OF WORK OF INVESTIGATORS FOR 1927.

No. of visits in connection with :—	1927
<i>Milk Investigations</i> —New cases .. . . . .	4,443 }
,,     Reinvestigations .. . . . .	5,811 }      10,244
<i>Dinner Investigations</i> —For Expectant and Nursing	}
Mothers, and Children .. . . . .	104 }
<i>Dinner Reinvestigations</i> — .. . . . .	84 }
<i>Medical Fees</i> —New cases .. . . . .	1,038 }
,,     Reinvestigations .. . . . .	274 }
,,     Home help investigations .. . . . .	154 }
Total visits .. . . . . . . . . . . . . . . . .	11,898
<i>Centre Work</i> :—	1926                   1927
Superintendent's duties .. . . . .	12 days              —
Milk Clerk's duties .. . . . .	70½ „              76 days
<i>Office Work</i> :—	
Clerical duties .. . . . . . . . . . . . . . . . .	12½ „              12½ „
Total .. .	204 days            88½ days

## OPHTHALMIA NEONATORUM.

BY DR. NORA SMITH.

During the year 1927, 802 cases of inflammation of the eyes were notified from various sources, and visited by the eye Nurses.

Of these, 358 were cases of disease in children. 253 suffered from simple conjunctivitis, 36 from blepharitis, 2 from keratitis, and 1 glioma; 2 were cases of corneal ulcer, 34 had nebula of cornea, and 1 had enucleation of one eye; 2 children had staphyloma, 2 strabismus, 9 congenital cataract, 1 had defective vision, 2 dacryocystitis, 1 ptosis of lid, 3 coloboma iris, 1 congenital mole, 1 case of blindness of both eyes following meningitis, and 7 cases of phlyctenule.

2 brothers, aged 2 years and 9 months respectively, who were found to be suffering from congenital absence of lens, were admitted to the Sunshine Home for Blind Babies at Southport.

In 1927, 444 cases of inflammation of the eyes of newly-born children occurred; 192 were notified by the medical attendants (either private or at the Royal Eye Hospital) as cases of ophthalmia neonatorum. The remaining 252 cases were notified by midwives, by medical record, as having called in medical aid for unsatisfactory eye condition of the newly-born infant.

Swabs were taken from the conjunctiva in all cases where possible, and sent to the Public Health Laboratory to be examined bacteriologically for the presence of gonococcus. Forty-nine swabs were examined, and of these 11 gave a positive result. In cases where the result of the swab was positive the mothers were advised to seek medical advice either from their own doctor or from the Clinic. 7 of these mothers were revisited at the end of six-months. It was ascertained that 1 mother was receiving treatment, 1 had removed City, and the remaining 5 stated that they had no discharge.

Table A shows the distribution of cases, both as regards the districts in which they occurred and the month of the year. The cases in which the cornea was affected are also shown in this table.

The largest number of cases of true ophthalmia neonatorum occurred in Collyhurst, Hulme, Chorlton-upon-Medlock, and Gorton.

The monthly rate of notified cases varies considerably, and there seems no special reason for the rise and fall in numbers. March and April head the list, followed by June.

TABLE A, 1927—NOTIFIED CASES OF OPHTHALMIA NEONATORUM, ALSO CASES REPORTED BY MIDWIVES BUT CONSIDERED TO BE CASES OF CONJUNCTIVITIS.

Month of Year	Cases of Confined-Visits												Cases with General Complaints		Plague Cases reported by Midwives		General Complaints Cases reported by Midwives	
	January	February	March	April	May	June	July	August	September	October	November	December	Total	Total	Total	Total	Total	Total
	1	1	1	1	2	1	1	1	1	1	1	1	14	11	1	1	1	1
Incoats	..	..	..	..	..	3	..	1	1	2	..	..	..	8	..	..	..	..
Central	..	..	..	..	..	4	..	1	1	3	..	2	3	26	76	..	..	..
Jollyhurst	..	..	3	2	4	..	3	1	1	..	1	1	..	9	6	..	..	..
Sheetham	..	..	..	1	4	..	1	1	..	..	1	1	..	2	4	1	..	..
Trumppall	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	3	..	..
Blackley	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Larpurhey	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Boston	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newton Heath	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bradford	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Deswick	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Clayton	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..
Ardwick	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..
Denshaw	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..
West Gorton	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..
Rusholme	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..
Chorlton-upon-Medlock	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..
Hulme	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..
Moss Side	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Withington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gorton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Levenshulme	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	16	13	22	22	8	21	13	8	15	18	17	19	192	..

TABLE B—1927. OPHTHALMIA NEONATORUM AND CONJUNCTIVITIS.  
HISTORY OF MOTHER.

Age of Mother	Parity									Abnormal	Abnormal	Present at birth	No. of mothers having had previous cases of Ophth. Neon.	History of yellow discharge	Legitimacy										
	Under 20	20—25	25—30	30—35 and Over	Total	Ascertained	No. of Notified Cases	No. of Notified Cases	No. of Corneal Cases																
Notified Cases	...	3	43	66	43	36	1	192	65	35	40	13	9	12	3	172	20	8	22	25	179	13			
Not Notified ..	..	10	51	78	57	55	1	252	68	49	54	31	13	9	6	5	17	—	238	14	14	16	8	249	3
Corneal Cases	...	1	3	1	5	2	—	—	12	6	—	3	—	1	2	—	—	—	—	—	—	—	10	2	5

	1927	192
Total cases notified	...	...
Total cases not notified	...	...
		<u>444</u>

TABLE C—1927. OPHTHALMIA NEONATORUM.

	Interval in days between birth and onset									Attended by				Where treated			Total No Doctor
	1	2	3	4	5	6	7	8	9	10	Total Midwife	Doctor Midwife and Doctor	Home	Out-Patient at Hospital or Patients at Hospital	In-Patient at Hospital	Total No Doctor	
Notified Cases	17	18	15	18	11	21	20	18	16	38	192	115	55	22	192	192	
Not notified	22	16	19	15	17	30	31	25	36	41	252	231	—	21	252	252	
Total cases notified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	192	
Total cases not notified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	252	

Table C shows the day of onset, the attendant at birth, and the place of treatment.  
 The greatest number of onsets were on the sixth and seventh days of life, and in over one-half of the cases the first signs of disease appeared after the first five days.

345 cases were treated by private doctors and 89 by the Royal Eye Hospital.  
 In 12 instances there was involvement of the cornea, and of these 10 cases were admitted into the Royal Eye Hospital. Two of these cases were reported by midwives, one being a congenital condition and the other was transferred to the Royal Eye Hospital before cornea became involved.

The number of cases with corneal involvement was 12 in all, being a decrease of 1 of last year. Two have completely recovered, 5 have nebula cornea (which will clear), 4 staphyloma (one of which is clearing and appears to have some sight), and one died during treatment.

TABLE D.—CASES WITH INVOLVEMENT OF THE CORNEA.

			1926	1927
Right Eye..	..	..	6	6
Left Eye	..	..	6	5
Both Eyes..	..	..	1	1
			13	12

Table E shows the results of the 192 cases of ophthalmia neonatorum and of the 252 of conjunctivitis in *newly-born infants*.

	Complete recovery	One Eye blind, other normal	One Eye blind, the other damaged	Both Eyes lost	Both Eyes damaged	One Eye damaged	Death before recovery	Removed before recovery	TOTALS	
									192	252
Ophthalmia Neonatorum	171	2	1	..	..	I	6	II	192	
Conjunctivitis	..	248	..	..	..	..	2	2	252	

Table F showing the total number of cases of ophthalmia and conjunctivitis in newly-born infants, and the percentage with corneal complications.  
1911-1927 :—

Year	No. of Cases	Percentage with Corneal complications
1911	525	7·23
1912	667	11·39
1913	573	12·04
1914	681	9·25
1915	642	7·79
1916	620	6·13
1917	539	6·86
1918	567	8·64
1919	698	4·73
1920	974	4·83
1921	921	2·28
1922	760	1·84
1923	836	1·20
1924	853	1·41
1925	849	0·82
1926	855	1·52
1927	802	1·62

## PUBLIC HEALTH (MEAT) REGULATIONS, 1924.

These regulations, which came into force on May 1st, 1925, are administered by the Public Health Committee in so far as Part V., which relates to shops, stores, etc., is concerned. With a view to the equitable administration of the regulations, the co-operation of the interested trades was sought, and mutual agreement with the associations concerned was arrived at on the following points :—

### *Requirements.*

1. Meat shall not be hung outside premises.
2. All meat which is displayed must be protected from the dust of the street by glass windows.
3. Reasonable precautions must be taken to protect meat from flies.
4. The provision of a covered receptacle of suitable material for refuse and sweepings is imperative, and the receptacle must be kept clean.
5. Shops must be adequately ventilated.
6. Particulars of structural arrangements required in premises where food is prepared may be obtained on application to the Medical Officer of Health.

### *Suggestions.*

1. That means be adopted for keeping all prepared meats covered. (Transparent paper could be used with good effects.)
2. That each shop be provided with a cold store or ice box for the storage of meat.
3. That persons engaged in the sale or handling of meat should wear white overalls. (Coloured ones now in use when worn out to be replaced by white.)
4. That notices be exhibited in shops to the effect that foodstuffs should not be handled by customers.
5. That, wherever possible, vertical glass fronts be provided on counters to protect meat, etc., from contact with or handling by customers.

2,005 visits were paid during the year to meat shops by the special inspectors, and it was found that these requirements and suggestions were generally being carried out.

In 61 cases a cautionary letter was necessary, and in 5 instances court proceedings had to be taken under Section 5 (a) of the Regulations, resulting in the imposition of penalties in each case for exposure of meat without reasonable precautions against contamination.

## BAKEHOUSES AND OTHER PREMISES IN WHICH FOOD IS PREPARED.

The total number of visits made by inspectors to bakehouses during the year was 1,440, and their routine work is referred to on page 192.

Visits were made in connection with 41 applications for approval of the use of premises as bakehouses, with the result that 15 were considered unsuitable and 26 were approved, subject to the fulfilment of certain conditions.

Fifty-three applications for sanction to the establishment of fish frying businesses were considered by the Public Health Committee. Twenty-seven were granted subject to the requirements of the Medical Officer of Health being completed satisfactorily, and 26 were refused on the grounds of unsuitability of the premises or the site.

Supervision of all places where food is prepared has been maintained, and minor alterations and improvements have been obtained in many cases without formal notice. In certain cases more extensive alterations have been required, and these have been dealt with by serving a specification prepared by the Housing Manager, with the following results:—

Nature of Business	Ward	Date Specification sent out	Result up to December 31st, 1927
Butchering . . .	All Saints . . .	27-1-27	Work completed 25-6-27.
" . . .	Moss Side W. . .	14-2-27	" 8-4-27.
" . . .	Moss Side E. . .	16-2-27	" 30-4-27.
" . . .	Rusholme . . .	16-2-27	" 8-7-27.
" . . .	New Cross . . .	19-2-27	" 3-11-27.
" . . .	Miles Platting . . .	21-2-27	Work in progress.
" . . .	Harpurhcy . . .	21-2-27	Work complcted 30-4-27.
" . . .	Chorlton-cum-H. . .	21-2-27	" 12-8-27.
" . . .	St. John's . . .	12-3-27	Work in progress.
" . . .	Collyhurst . . .	12-3-27	Work complcted 30-10-27.
" . . .	Blackley . . .	16-3-27	" 29-8-27.
" . . .	St. John's . . .	17-3-27	" 16-5-27.
" . . .	Moss Side E. . .	7-4-27	" 6-9-27.
" . . .	Medlock Street . . .	12-5-27	Work in progerss.
" . . .	Ardwick . . .	25-6-27	"
" . . .	Gorton . . .	30-6-27	"
Meat Pie Bakery . . .	St. John's S. . .	1-5-27	Work completed 12-7-27.
Butchering . . .	St. Luke's . . .	1-7-27	Work in progress.
" . . .	St. Luke's . . .	1-7-27	"
Pickle Factory . . .	Blackley . . .	1-8-27	Discontinued
Butchering . . .	All Saints . . .	1-8-27	Work in progress.
" . . .	Ardwick . . .	1-9-27	"

## **FOOD POISONING.**

No outbreak of food poisoning was recorded in 1927.

## SPECIAL INSPECTORS' REPORT, 1927.

## REPORT OF THE SANITARY SECTION.

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By MR. J. WALTON, CHIEF SANITARY INSPECTOR.

The City, for inspection and other purposes, is divided into 45 districts, to each of which one Sanitary Inspector has been assigned, in accordance with the reorganisation scheme which came into operation in 1926.

In addition to these there is one Chief Inspector, two Divisional Inspectors, one Technical and Chemical Inspector, one floating District Inspector, two Drainage, four Smoke; one Canal Boats, three Adulteration of Food, two female Shops and Workshops Inspectors, and three Drainage Excavators.

The whole Inspectorate is supervised by the Chief Inspector.

The Administrative and Clerical, etc., Services are dealt with by a staff of 28 Clerks, under the control of the Chief Clerk, who also has under supervision the Public Conveniences and the Municipal Hostels.

In connection with the Public Conveniences there is a Foreman, with an Assistant, a female Supervisor, and staff of 43 male and 23 female Attendants and Cleaners.

At the Municipal Hostels there is a Manager and an Assistant, with a staff of 37 Porters, Laundresses, etc., at Walton House (males), and a Manageress and staff of 16 Portresses, etc., at Ashton House (females).

In the Drainage Department (which is under the Housing Manager) there are also four Clerks and three Clerks of Works for supervising and measuring up work done by the contractors employed by the department in carrying out private drainage work.

The number of complaints of nuisances of various kinds received during the year was 12,244 :—

3,621 from the Medical Officer of Health's Department.

6,719 from the public.

58 from H.M. Inspector of Factories.

54 from the Police.

1,792 from various other sources. (See Table 1.)

The total number of inspections made during the year by the District Inspectors was 165,186 ; 5,465 reports were made to the Medical Officer of Health, and 6,141 to other Committees. (See Table 2.)

8,401 notices were issued during the year under the Public Health and Housing and Local Acts and Bye-laws, etc., and 8,070 notices were complied with. (See Table 3.)

### OFFENSIVE TRADES.

The number of offensive trades on the register is 843. These have been placed under close supervision and periodical inspections made. (See Table 4.)

### OFFENCES REPORTED TO NUISANCE SUB-COMMITTEE.

173 reports of non-compliance with notices, etc., were made by the Inspectors, in 130 cases the offenders were cautioned, 7 referred to other Committees, and 36 referred to the Magistrates. Fines amounting to £22 2s. were imposed in 22 instances, 1 Magistrates' Order was granted, 1 ordered to pay costs only, and 12 withdrawn. (See Table 5.)

### WORKSHOPS, BAKEHOUSES, SHOPS ACTS, AND ORDERS MADE THEREUNDER.

During the year the Factory and Workshop Act of 1901 has received attention of the male and female Inspectors, and 7,341 inspections have been made.

Provision for means of escape in case of fire in factories and workshops has also received attention, and all known cases of danger have been dealt with.

Periodical changes will, of course, take place from time to time in various ways, which will bring buildings within the meaning of the Act, and necessitate the constant supervision of the Inspectors and action on the part of the authorities.

The number of bakehouses in the City is 667; of these 47 are situate in basement premises, and special attention has been given to them.

The Shops Acts, 1912 to 1920, have received attention, registers of all shops having been prepared, and 21,345 inspections were made. Orders of exemption from compulsory closing have been made in 33 trades. In six trades Orders have been made fixing the day for the weekly half-holiday, and in three trades Orders have been made fixing the closing hour for the several days of the week.

246 infringements of the Shops, etc., Acts were reported to the Shops, Workshops, etc., Sub-Committee, and in 98 cases legal proceedings were ordered, the remainder being cautioned. Of the 98 cases summoned 60 were fined, the fines amounting to £37 15s., and 23 cases were ordered to pay costs only (£6 5s.), 13 cases were withdrawn, and 2 cases dismissed. (See Table 7.)

8,690 visits have been paid to houses in various parts of the City in which outwork is carried on, but constant visitation is necessary to maintain the standard of cleanliness which is to be desired, especially in houses in which shirt-making, handkerchief-hemming, brace-making, and umbrella-covering, etc., is done.

The people, as a rule, appear willing to carry out any suggestion made by the Inspectors to keep their houses clean ; but at the same time it is almost impossible for small houses, sometimes containing large families, to be kept in such a satisfactory condition as workshops. (See Tables 6 and 8.)

Table 9 is the Annual Report on the administration of the Factory and Workshops Act, 1901, as required by the Home Office.

#### HOUSES LET IN LODGINGS.

Under the powers given by Section 90 of the Public Health Act the bye-laws made thereunder have been enforced.

There are 2,115 houses let in lodgings on the register, of which 3,895 day and 113 night inspections have been made.

32 infringements were reported to the Nuisance Sub-Committee. 12 were cautioned and 20 summoned before the Magistrates, who imposed fines in 15 cases, amounting to £5, and 2 cases were ordered to pay costs only, the remaining 3 being dismissed or withdrawn. (See Table 10.)

Table 10A is a summarised statement of the work done by the Sanitary Inspectors during the year.

#### SMOKE NUISANCES.

For the abatement of smoke nuisances the four Inspectors appointed specially for this work have taken 947 timed observations of half-an-hour each, with the result that 137 notices for the abatement of nuisances have been served. Proceedings before the Magistrates were ordered in 134 cases out of 167 offences reported.

The number of offenders cautioned or excused was 33.

The 134 were summoned before the Justices, and in 111 instances fines were imposed amounting to £238 10s., and one was ordered to pay costs only (5s.).

14 orders of abatement were granted and served, and the costs paid in connection therewith amounted to £5 12s., and 3 cases were dismissed and 5 withdrawn.

Much attention during the past year has been given to the nuisance caused by the emission of black smoke, not only from the furnaces connected with boilers in mills, warehouses, and other works, but also from chemical and other industries, and the efforts made have already resulted in a considerable reduction of the nuisance.

Chimneys of firms in adjoining districts have also been observed in regard to smoke nuisances, and communications sent to the authorities concerned (See Table 11.)

### ADULTERATION OF FOOD AND DRUGS.

3,028 samples (1,217 of milk) have been taken, of which 116 were reported to be adulterated. Magisterial proceedings were taken in 31 cases, fines amounting to £27 5s. being imposed in 18 instances, 8 being ordered to pay costs only, and 5 were dismissed or withdrawn. The total costs were £28 3s. 6d. In 15 cases the offenders were cautioned by the Committee, and as regards the remaining 70 no action was taken owing to the adulteration being slight or the sample taken informally.

The percentage of samples adulterated for the year was 3·76 (milk adulteration 7·14 per cent.). (See Table 12.)

Under the Milk and Cream Regulations, 1912 and 1917, 1,217 samples of milk and 13 of cream not sold as preserved cream were examined for the presence of preservatives; 5 samples of cream were found to contain preservative and these cases were cautioned by the Committee. In all other respects the requirements of the Regulations were observed. (See Table 13.)

### CANAL BOATS ACTS.

The number of canal boats on the register is 417.

The number of inspections made was 1,651.

Caution notices were sent to the owners or masters of 28-boats, 26 of which were complied with. 5 cautionary letters have been sent, and in 29 cases the Inspector has verbally cautioned the owners or masters for infringements, all of which have been attended to.

### RAG FLOCK ACT, 1911.

152 visits have been made and 30 samples taken, of which 4 did not conform to the standard of cleanliness prescribed by the Act. Magisterial proceedings were taken in these cases, and fines amounting to £10 being imposed in 2 cases and £3 3s. costs in 1 case. (1 summons was issued for 2 of these offences.)

### FABRICS (MISDESCRIPTION) ACT, 1913.

67 visits under the provisions of the Act have been made during the year, but no samples were taken, as in no case would the vendor declare the material to be non-inflammable.

### POISONS AND PHARMACY ACT, 1908.

Under this Act and the Regulations made thereunder 22 licences have been renewed during the year and 9 new licences have been issued.

### HOUSING AND UNHEALTHY DWELLINGS.

A special report on housing conditions shows that 85,094 inspections and reinspections of houses have been made during the year, irrespective of those made under the Housing Regulations, 1910-1925. 4,652 dwelling-houses were rendered fit as the result of the service of informal notices.

Under Section 3 of the Housing Act, 1925, 213 dwelling-houses were dealt with by notices, 207 being rendered fit, 184 by owners and 23 by the local authority in default.

916 dwelling-houses were dealt with by notices issued under the Public Health Acts, the majority of which were rendered fit.

The number of houses certified and dealt with by the Housing and Unhealthy Dwellings Sub-Committee from 1885 to December, 1927, is 27,459.

Owing to prevailing conditions with regard to housing shortage only 6 cases of "Houses unfit for habitation" were certified, but in one or two isolated instances the Chief Inspector recertified the houses where no alteration had been carried out and the property had become dangerous. (See Table 15.)

#### DRAINAGE SECTION.

The Drainage Section during the year has, after notice or at the request of owners, dealt with 1,166 dwelling-houses and 360 business premises at a cost of £10,067 8s., of which amount £7,448 11s. 5d. was charged to the owners and the remainder (£2,618 16s. 7d.) to the City Fund. (See Table 16.)

#### PUBLIC CONVENIENCES.

There are 45 Public Conveniences in the City, 25 of which are for males and 20 for females. There are also 91 Public Urinals in the City.

The management and collection of monies from the Public Conveniences are controlled by the Chief Clerk, and during the financial year ended 31st March, 1928, the receipts amounted to £7,079 7s. 7d.

One new Convenience is in course of erection, and suitable sites are being acquired with a view to erecting Public Conveniences in areas at present insufficiently accommodated. (See Table 17.)

#### MUNICIPAL HOSTELS.

The two Municipal Hostels—"Ashton House" (for females) and "Walton House" (for males)—are supervised by the Chief Clerk, and during the financial year ended 31st March, 1927, have been well patronised.

"Ashton House," with 210 beds, has accommodated 70,492 lodgers—an average of 193 per night. The charges are 10d. and 1s. per night, or 5s. and 6s. per week, and during the year the receipts, including catering, amounted to £4,074 15s. 3d.

"Walton House" has accommodation for 467 lodgers, and during the year the total number of beds occupied was 170,392, averaging 466 per night. The charges are 1s. per night, or 6s. 6d. per week, and the turnover, including the Catering Department, was £15,034 4s. 7d.

TABLE NO. I.—SHOWING THE NUMBER OF COMPLAINTS RECEIVED.

MUNICIPAL WARD	Medical Officer of Health	Sanitary Inspector's	Cleansing Department	Surveyor's Department	H.M. Inspector of Factories	Police	Public	Anonymous	Totals
All Saints	141	4	15	4	1	2	325	1	493
Ardwick	201	89	35	..	1	6	257	1	590
Beswick	168	24	10	..	..	5	158	..	365
Blackley	20	2	36	..	..	..	91	1	150
Bradford	291	21	29	..	1	9	226	2	579
Cheetham	31	29	19	3	1	..	286	2	371
Chorlton-cum-Hardy	31	..	5	2	..	..	222	..	260
Collegiate Church	146	216	..	..	17	..	292	1	672
Collyhurst	199	34	13	3	..	2	175	4	430
Crumpsall	21	3	28	..	..	1	79	1	113
Didsbury	25	1	5	2	..	..	82	..	115
Exchange	4	..	..	..	..	..	10	..	14
Gorton North	59	11	38	2	..	2	238	1	351
Gorton South	77	10	13	..	..	..	281	..	381
Harpurhey	49	..	12	1	2	2	130	..	196
Levenshulme	58	1	7	..	..	..	106	..	172
Longsight	41	23	..	..	..	5	229	4	302
Medlock Street	192	13	4	5	..	..	369	..	583
Miles Platting	160	31	3	3	..	1	221	2	421
Moston	46	14	16	..	2	1	91	1	171
Moss Side East	68	44	7	2	1	1	282	1	406
Moss Side West	40	63	3	3	2	..	275	3	389
New Cross	381	60	24	14	4	2	244	7	736
Newton Heath	43	28	3	..	2	..	120	1	197
Openshaw	162	55	70	1	2	8	242	..	538
Oxford	7	..	1	2	..	..	42	5	57
Rusholme	64	27	31	2	..	1	177	1	303
St. Ann's	20	4	..	..	6	..	32	7	69
St. Clement's	106	..	17	1	5	1	47	3	180
St. George's	109	158	4	..	1	..	341	5	618
St. John's	123	24	11	1	7	1	146	3	316
St. Luke's	147	17	8	3	1	3	288	6	473
St. Mark's	228	22	87	1	3	..	234	1	576
St. Michael's	125	74	18	9	1	1	254	2	484
Withington	38	2	4	2	..	..	127	..	173
<b>TOTALS</b>	<b>3,621</b>	<b>1,104</b>	<b>556</b>	<b>66</b>	<b>58</b>	<b>54</b>	<b>6,719</b>	<b>66</b>	<b>12,244</b>

TABLE NO. 2.—SHOWING NUMBER OF INSPECTIONS, ETC., MADE DURING THE YEAR 1927.

MUNICIPAL WARD	Dwellings- houses under Housing Acts	Dwellings-		Premises offices	Trades shops	Stables	Cellars	Sluaghter- houses	Accommodation at Parks	Satellite Buildings	Shops	Factories and workshops	Habkhouses	Misellianous Institutions	Investigations into infectious diseases	Inspections of impeccable houses	Diseased Roads	Drains Tested by Water	Reports sent to Other authorities	Reports sent to Committtee					
		dwelling-	houses																						
All Saints	..	91	2	250	..	271	..	271	..	281	..	494	2	48	..	32	..	73	51	72	310	1083	5391		
Ardwick	..	1535	2088	145	158	1	603	1	49	..	281	..	929	48	12	..	12	715	205	325	1311	8040	234		
Beswick	..	1112	2252	6	157	15	290	..	5	..	..	..	..	12	..	..	..	50	86	455	1414	6822	525		
Blackley	..	362	774	1	59	2	319	..	44	..	44	..	44	5	12	..	50	46	102	330	679	229	151		
Bradford	..	7	2185	68	138	1	346	..	346	..	346	..	346	17	17	..	38	17	19	479	590	1146	5477		
Cheetham	..	388	952	17	55	..	312	..	312	..	312	..	312	13	13	..	42	40	23	54	419	683	3522		
Chorlton-c.-H.	..	104	1904	92	67	67	274	..	274	..	274	..	274	6	6	..	74	65	122	470	1115	5336	508		
Collegiate Ch.	..	448	1815	166	40	..	444	..	444	..	444	..	444	10	10	..	615	254	25	39	423	1181	6004		
Collyhurst	..	580	1568	42	95	..	256	..	256	..	256	..	256	1	1	..	5	607	95	30	206	365	1161	6049	
Crumpsall	..	101	729	2	24	..	315	..	315	..	315	..	315	19	19	..	292	23	8	394	107	315	234		
Didsbury	..	701	853	24	26	17	275	..	275	..	275	..	275	17	17	..	51	55	339	174	86	175	464		
Exchange	..	2	422	13	13	..	..	..	..	..	..	..	..	..	..	..	133	249	2	..	18	..	847		
Gorton North	..	236	1195	5	85	1	665	..	19	..	19	..	19	12	11	..	346	56	44	48	369	998	4090		
Gorton South	..	466	1895	3	159	3	334	..	5	..	5	..	5	57	47	94	835	34	71	96	296	947	5342		
Harpurhey	..	791	1289	15	78	4	213	..	52	..	52	..	52	45	45	..	1021	85	69	79	357	914	5066		
Levenshulme	..	155	1635	27	56	..	153	..	56	..	56	..	56	21	21	..	178	93	61	28	299	618	3643		
Longsight	..	568	2765	27	71	3	249	..	37	1	37	1	37	11	94	..	1068	64	42	42	146	338	894		
Medlock Street	..	242	3678	161	218	2	287	..	282	..	282	..	282	18	18	..	7	739	54	35	141	175	1348	7669	
Miles Platting	..	482	1663	119	102	6	222	..	222	..	222	..	222	18	18	..	820	94	49	142	329	1576	5648		
Moston	..	259	875	23	76	2	228	..	228	..	228	..	228	3	3	..	53	22	41	670	18	30	66		
Moss Side East	..	1317	33	82	4	307	..	112	..	112	..	112	4	4	..	24	2	416	70	65	120	203	731	3486	
Moss Side West	..	229	1695	15	56	..	178	..	29	1	29	..	29	19	19	..	265	34	55	162	253	534	3525		
New Cross	..	621	3130	37	180	1	516	..	329	..	329	..	329	5	5	..	1471	146	30	93	378	1318	8286		
Newton Heath	..	39	918	108	74	17	191	..	5	..	5	..	5	4	4	..	59	201	51	9	181	304	713		
Openshaw	..	152	2567	101	125	1	366	..	23	..	23	..	23	24	24	..	10	5	315	76	47	105	486	1208	316
Oxford	..	54	57	1022	14	..	286	..	60	..	30	..	30	..	..	..	22	370	175	82	114	206	672	5071	
Rusholme	..	933	1472	4	44	2	213	..	30	..	30	..	30	..	..	..	13	433	289	7	11	18	4	1714	1
St. Ann's	..	..	5	932	..	2	..	..	..	..	..	..	..	5	5	..	5	395	218	20	45	97	399	2774	183
St. Clement's	..	26	817	326	54	3	327	..	42	..	42	..	42	..	..	..	11	..	353	113	46	343	434	1339	8518
St. George's	..	409	3995	200	302	..	587	..	386	..	386	..	386	5	5	..	146	146	190	13	14	14	75	240	2636
St. John's	..	110	837	398	41	4	281	5	251	1	23	..	23	7	7	..	310	59	29	73	1178	4494	456	1129	
St. Luke's	..	..	1591	28	83	..	435	..	347	..	347	..	347	11	11	..	219	114	3	300	28	15	80	321	1068
St. Mark's	..	176	2038	42	114	..	543	..	219	..	219	..	219	11	11	..	543	6	139	139	139	12	68	761	924
St. Michael's	..	432	1602	100	90	6	310	11	543	8	342	..	342	8	8	..	342	6	342	342	342	342	342	5308	
Withington	..	157	1050	25	34	..	..	..	..	..	..	..	..	38	38	..	1447	339	57	39	57	39	845	4846	
TOTALS		12465	55365	4796	3061	114	10603	16	3908	7	622	640	3821	19122	4338	1440	4099	11040	29829	115186	4447	5465	6141	11834	

TABLE NO. 3 -- SHOWING THE NUMBER OF NOTICES ISSUED AND COMPLIED WITH UNDER THE PUBLIC HEALTH, HOUSING, FACTORY AND WORKSHOP, AND THE VARIOUS LOCAL ACTS AND BYE-LAWS DURING 1927.

ACT OF PARLIAMENT	WORK REQUIRED TO BE DONE	Number of Notices Issued	Number of Notices complied with *
P.H. Act, 1875, S. 41, and P.H. Act Amend. Act, 1890, S. 19	Reconstruction of drains .. . . . .	223	318
P.H. Act, 1875, S. 23 .. . . . .	Provide sufficient drains .. . . . .	32	31
Manchester Improvement Act, 1845, S. 46 ..	Open, cleanse, etc., drains .. . . . .	926	889
P.H. Act, 1875, S. 36 .. . . . .	Provide ashbins, repair water-closets, etc. ..	377	409
P.H. Act, 1875, S. 91 .. . . . .	To abate nuisances .. . . . .	215	219
Manchester Corporation Waterworks and Improvements Act, 1869, Sec. 29	Renew defective downspouts and gutters ..	890	861
Manchester New Streets Act, 1853, Sec. 41 ..	Flagging of yards and passages .. . . . .	291	199
Manchester New Streets Act, 1853, S. 41, and Manchester Corporation Act, 1891, S. 38	Repairs to surfaces of yards and passages ..	1,110	995
P.H. Act Amendment Act, 1907, S. 49 .. . .	Provide sinks and drains, etc. .. . . . .	2	2
Manchester Corporation Waterworks and Improvements Acts, 1867-1869	Repairs to privies, etc. .. . . . .	416	422
Housing Act, 1925 .. . . . .	General repairs to houses, internal and external	148	164
Manchester Corporation Waterworks and Improvement Act, 1869, S. 31	Discontinue keeping swine .. . . . .	..	..
Manchester Police Act, 1844, S. 86 .. . .	Cleanse and limewash houses .. . . . .	94	89
P.H. Act, 1875, S. 91-94; Factory and Workshops Acts, 1878-1901	To remedy defects in Workshops .. . . . .	28	29
Factory and Workshops Act, 1901, S. 2, and P.H. Act, 1875	Cleanse and limewash Workshops .. . . . .	11	10
P.H. Act, 1875, S. 49 .. . . . .	Removal of manure .. . . . .	..	..
Manchester New Streets Act, 1853 .. . .	To close cellar dwellings .. . . . .	..	..
Not issued under any Act of Parliament .. .	Preliminary notice for general repairs, internal and external	3,349	3,125
Factory and Workshops Act, 1901, S. 15, and Bye-laws made thereunder	Provide adequate means of escape in case of fire	18	13
Factory and Workshops Act, 1901, S. 14 (2) ..	Provide adequate means of escape in case of fire	..	..
(Factory erected before 1892. Workshop before 1896.)	Removal of horse manure and provision of manure-steads	24	38
Bye-laws .. . . . .	Houses let in lodgings .. . . . .	155	154
	Tents, vans, etc. .. . . . .	92	103
	TOTALS .. . . . .	8,401	8,070

In addition to the above, 832 circular-letters were sent to owners re defective water-closets, and 1,560 orders on the Cleansing Department for new ashbins were issued to owners or contractors; also 28 notices were issued or repaired to canal boats, 26 of which were complied with.

\* In these figures are included a number of notices outstanding from the previous year.

TABLE No. 4.—SHOWING THE NUMBER OF OFFENSIVE TRADES IN EACH DISTRICT WITHIN THE CITY.

WARDS	CLASSIFICATION OF TRADES	Totals	
		Washing and Works	Bronzing Works
All Saints ..	Asphaltic Manufactures	..	..
Ardwick ..	Fisherman and Fishers	..	..
Beswick ..	Bone Boileries	..	..
Blackley ..	Blood Boileries	..	..
Brabford ..	Breast Burmery	..	..
Cheetham ..	Cheemical Manufactures	..	..
Chorlton-cum-H.	Cydele Cementers	..	..
Collegiate Church ..	Manufacturers	..	..
Collyhurst ..	Potash and Chlp	..	..
Crumpsall ..	Potatoe Cookers	..	..
Didsbury ..	Prepearters	..	..
Exchange ..	Sausage Skins	..	..
Gorton North ..	Gut Cleaners &	..	..
Gorton South ..	Horse Slaugherers	..	..
Harpurhey ..	Indra-ribber Manufacturers	..	..
Levenshulme ..	Oil Manufactures	..	..
Longsight ..	Palm, Varnish, and Size Manufactures	..	..
Medlock Street ..	Pickle Manufactures	..	..
Miles Platting ..	Rag and Bone Stores	..	..
Moston ..	Scop Boileries	..	..
Moss Side East ..	Tanneries and Leather Procesers	..	..
Moss Side West ..	Tallow Mefeters, Oil Refiners, etc.	..	..
New Cross ..	Tripe Boileries	..	..
Newton Heath ..	Washing and Works	..	..
Openshaw ..	..	..	..
Oxford ..	..	..	..
Rusholme ..	..	..	..
St. Ann's ..	..	..	..
St. Clement's ..	..	..	..
St. George's ..	..	..	..
St. John's ..	..	..	..
St. Luke's ..	..	..	..
St. Mark's ..	..	..	..
St. Michael's ..	..	..	..
Withington ..	..	..	..

## MAGISTERIAL PROCEEDINGS.

OFFENCE	Cases Reported	Ordered to be Summoned	Closing Orders Made	Cautionsed	Excluded	Number Summoned	Number Fined	Orders to Pay Costs only	Magistrates' Orders	Number of Grantees	Withdrawn	Dismissed	Amount of Costs
Neglecting to provide effective downspouts after notice ..	66	i	..	65	1	1	..	..	..	..	..	..	..
Neglecting to abate overcrowding after notice ..	14	1	..	7	6	1	..	..	1	..	..	..	0 8 0
Neglecting to repair or provide privies, water-closets, etc., after notice ..	28	1	..	..	27	1	..	1	..	..	..	..	0 5 0
Neglecting to comply with bye-laws re tents, vans, etc. ..	17	3	..	..	14	3	2	..	..	1	..	..	0 10 0
Neglecting to cleanse houses after notice ..	9	6	..	..	3	6	4	..	..	2	..	..	..
Neglecting to remove accumulations of offensive matter, etc., after notice ..	6	..	..	..	..	6	..	..	..	..	..	..	..
Neglecting to comply with bye-laws re stables ..	10	2	..	..	..	8	2	1	..	..	..	..	..
Neglecting to cleanse and limewash walls and ceilings after service of notice ..	1	..	..	..	..	1	..	..	..	..	..	..	..
Obstructing the Inspector in the execution of his duty (Housing Act 1925)	2	2	..	..	..	..	2	2	..	..	..	..	..
Causing effuvia to be emitted from a works so as to be a nuisance ..	10	10	..	..	..	..	10	2	..	..	..	..	8 0 0
Occupying houses after orders to close have been made ..	10	10	..	..	..	..	10	10	..	..	..	..	2 10 0
Totals .. .. .. .. .. ..	36	173	..	7	130	36	22	1	12	..	22	2	0 13 0

TABLE No. 6.—SHOWING THE WORK DONE BY THE INSPECTORS UNDER THE FACTORY AND WORKSHOPS AND SHOPS ACTS DURING 1927.

MUNICIPAL		WARD		SHOPS		FACTORIES AND WORKSHOPS		BAKEHOUSES		OUTWORKERS	
Number	Visited	Number	Visited	Number	Visited	Number	Visited	Number	Visited	Number	Visited
All Saints	..	..	..	5	777	73	3	..	..	329	51
Ardwick	..	..	..	18	791	259	3	..	..	246	101
Beswick	..	..	..	5	714	130	1	..	..	82	86
Blackley	..	..	..	5	358	46	..	..	..	60	45
Bradford	..	..	..	3	516	86	..	..	..	131	19
Cheetham	..	..	..	4	534	40	..	..	..	142	23
Chorlton-eum-Hardy	..	..	..	9	363	2	..	..	..	72	2
Collegiate Church	..	..	..	2	461	395	1	..	..	722	25
Collyhurst	..	..	..	6	1,607	254	..	..	..	91	30
Crumpsall	..	..	..	9	292	799	..	..	..	86	8
Didsbury	..	..	..	1	339	1	174	..	..	79	86
Exchange	..	..	..	12	133	261	174	..	..	445	2
Fionton North	..	..	..	1	346	12	611	249	..	44	44
Gorton South	..	..	..	1	835	12	379	56	..	76	71
Harpurhey	..	..	..	1	1,021	1	563	34	..	69	69
Levenshulme	..	..	..	1	263	1	580	85	..	80	61
Longsight	..	..	..	28	1,065	1	399	93	..	81	42
Medlock Street	..	..	..	40	739	12	373	64	..	181	35
Moston	..	..	..	11	1,124	11	1,124	54	..	158	49
Moss Side East	..	..	..	..	820	..	620	94	..	33	30
Moss Side West	..	..	..	..	670	..	325	18	..	82	65
New Cross	..	..	..	..	416	..	382	70	..	87	55
Newton Heath	..	..	..	..	265	..	571	34	..	401	30
Platt	..	..	..	..	1,471	10	4	1	..	109	9
Openshaw	..	..	..	..	201	1	1	1	..	146	47
Oxford	..	..	..	..	315	10	4	739	76	536	28
Rusholme	..	..	..	..	203	..	350	687	2	85	82
St. Ann's	..	..	..	..	732	10	5	362	175	285	7
St. Clements'	..	..	..	..	433	9	5	495	289	42	20
St. Georges	..	..	..	..	395	4	2	592	218	243	46
St. John's	..	..	..	..	353	11	3	1,097	113	337	5
St. Luke's	..	..	..	..	146	..	3	3,350	190	299	29
St. Mark's	..	..	..	..	310	9	7	665	59	128	15
St. Michael's	..	..	..	..	300	..	..	703	28	259	12
Withington	..	..	..	..	298	..	3	600	139	55	39
Mrs. Rosa G. Cliff	..	..	..	..	339	14	3	258	67	14	11
Miss Margaret F. Gunn.	..	..	..	..	1,276	..	..	456	10	5,746	4
	..	..	..	..	947	..	..	2,547	32	2,944	..
Total	21,345	..	..	..	10,677	..	87	40	37	660	1,440
	667	..	..	..	7,241	..	87	40	37	660	8,690

TABLE NO. 2  
THE ACTION TAKEN, AND THE DISPOSAL WHERE LEGAL PROCEEDINGS WERE INSTITUTED.

OFFENCE	COMMITTEE PROCEEDINGS		MAGISTERIAL PROCEEDINGS						
	Cases reported	Ordered to be summoned	Cautioned	Referred to	Excused	Number Summoned	Number Fined	Amount of Fines	Amount of Costs
Did exhibit the prescribed form incorrectly stating the assistants' weekly half-holiday	171	54	117	..	..	54	34	18	..
Did employ the assistants on the declared half-holiday	22	13	9	..	..	13	6	1	..
Did not affix the prescribed form as to the assistants' half-holiday	30	16	14	..	..	16	12	3	..
Did not exhibit the abstract as to young persons	7	4	3	..	..	4	4	..	..
Shop open in contravention of the "Closing Orders"	8	5	3	..	..	5	3	..	..
Did not allow assistants interval for meals	4	4	..	..	..	4	..	..	..
Did obstruct the Inspector in the execution of his duty	1	1	..	..	..	1	1	..	..
Did not maintain means of escape in case of fire in a satisfactory condition	1	..	1	..	..	..	..	..	..
Did not forward the list of out-workers to this department	1	..	1	..	..	..	..	..	..
Did not limewash bakehouse every six months in accordance with the Act	1	1	..	..	..	1	..	..	..
Totals . . . . .	246	98	148	..	..	98	60	23	..
						13	2	37 15 0	6 5 0

TABLE No. 8.

SHOWING THE NUMBER AND CLASSIFICATION OF PERSONS EMPLOYED AS OUTWORKERS BY FIRMS WITHIN THE CITY, AND THE NUMBER OF SUCH FIRMS.

TRADES	No. of Employers	No. of Outworkers or Contractors employed
Makers of Wearing Apparel .. .. .. ..	314	1355
Button Carding .. .. .. ..	1	6
Cabinet Makers and Upholsterers .. .. ..	3	9
Artificial Flower Makers .. .. .. ..	1	1
Chamois Mops .. .. .. ..	4	46
Furriers .. .. .. ..	1	2
Fent Sorters .. .. .. ..	—	—
Football Makers .. .. .. ..	1	2
Handkerchief Hemmers .. .. .. ..	7	15
Lace, Lace Curtains, and Nets .. .. ..	1	—
Opticians .. .. .. ..	—	—
Paper Bag and Box Makers .. .. ..	1	—
Quilt, Cushion, etc., Makers .. .. ..	9	174
Umbrella Trimmers .. .. .. ..	15	142
Window Blinds .. .. .. ..	2	3
Watch and Clock Repairers .. .. .. ..	1	1
Shopping Bag Makers .. .. .. ..	2	38
Sponge Cloths, Dusters, etc. .. .. ..	1	1
Hygienic Cleaning .. .. .. ..	1	2
Totals .. .. ..	365	*1797

\*1,599 of these are in the City, the remainder are in the districts of other Local Authorities, to whom lists showing the names and addresses have been sent.

TABLE No. 9.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1927, FOR THE COUNTY BOROUGH OF MANCHESTER, ON THE ADMINISTRATION OF THE FACTORY AND WORKSHOP ACT, 1901, IN CONNECTION WITH FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

I.—INSPECTION OF FACTORIES, WORKSHOPS, AND WORKPLACES.  
*Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.*

Premises	Number of		
	Inspections	Written Notices	Prosecutions
Factories (including Factory Laundries) ..			
Workshops (including Workshop Laundries) ..	8,781	57	1
Workplaces 'other than Outworkers' premises included in Part 3 of this Report) .. ..			
Total .. .. .. .. .. ..	8,781	57	1

TABLE NO. 9—*continued*

## 2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS, AND WORKPLACES.

Particulars	Number of Defects			No. of Prosecutions
	Found	Remedied	Referred to H.M. Inspector	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of cleanliness .. .. .	33	33	..	..
Want of ventilation .. .. .	6	5	1	..
Overcrowding .. .. .	1	1	..	..
Want of drainage of floors ..	..	..	..	..
Other nuisances .. .. .	38	36	..	..
<i>Sanitary accommodation—</i>				
Insufficient .. .. .	26	9	..	..
Unsuitable or defective ..	26	14	9	..
Not separate for sexes ..	1	1	..	..
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bakehouse (S. 101) ..	2	2	..	..
Other offences (excluding offences relating to outwork and offences under the sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers Order, 1921).)	116	84	10	1
Total .. .. .. ..	249	185	20	1

\* Including those specified in sections 2, 3, 7, and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

NOTE.—The Factory and Workshop Act, 1901 (S. 132), requires the Medical Officer of Health in his Annual Report to the District Council to report specifically on the administration of that Act in workshops and workplaces, and to send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State (Home Office). If the Annual Report is presented otherwise than in print, it is unnecessary to include in the copy sent to the Home Office the portions which do not relate to factories, workshops, workplaces, or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Memorandum of December, 1904. A further Memorandum, on the Home Work Provisions of the Factory Act, was issued to all District Councils and Medical Officers of Health in October, 1906.

I append a brief Statement on the Memorandum of the Home Office upon the structural requirements of the Factory and Workshop Acts, as to

1. Means of escape from fire :—

Bye-laws have been in operation since 1908. These have been amended, and in their amended form were approved by the Local Government Board in 1913.

A large amount of work has been done under these bye-laws, and practically the whole of the factories and workshops have been dealt with.

2. Sanitary accommodation :

Although the work has not been carried out under the Sanitary Accommodation Order, 1903, the conditions stated in the Memorandum have been enforced, and all the factories and workshops have been dealt with, although changes are constantly occurring.

TABLE NO. 10.—SHOWING THE NUMBER OF HOUSES LET IN LODGINGS IN THE CITY, THE NUMBER OF VISITS TO SUCH HOUSES, AND THE NUMBER OF CASES REPORTED FOR OFFENCES AGAINST THE BYE-LAWS DURING 1927.

MUNICIPAL WARD	Number of Houses let in Lodgings on the Register	Number of Visits		Number of Offences reported to the Committee	Number ordered to be summoned	Number cautioned, excused, reported to other Committee
		Day	Night			
All Saints	268	253	18	..	..	..
Ardwick	94	274	7	3	2	1
Beswick	10	37	3	1	..	1
Blackley	7	5	..	..	..	..
Bradford	32	40	4	2	2	2
Cheetham	49	72	2	2	2	..
Chorlton-cum-Hardy	3	25	1	1	..	1
Collegiate Church	432	477	..	..	..	..
Collyhurst	15	23	..	..	..	..
Crumpsall	7	11	..	3	3	..
Didsbury	6	17	..	..	..	..
Exchange	..	..	..	..	..	..
Gorton North	8	18	1	..	..	..
Gorton South	4	5	..	5	5	..
Harpurhey	30	52	..	..	..	..
Levenshulme	9	20	..	..	..	..
Longsight	15	56	..	..	..	..
Medlock Street	122	273	9	3	3	..
Miles Platting	25	18	..	..	..	..
Moston	1	3	..	..	..	..
Moss Side East	94	110	2	1	..	1
Moss Side West	28	24	5	..	..	..
New Cross	140	319	10	6	..	6
Newton Heath	4	5	..	..	..	..
Openshaw	17	22	1	..	..	..
Oxford	7	60	..	..	..	..
Rusholme	20	30	..	..	..	..
St. Ann's	..	..	..	..	..	..
St. Clement's	20	37	5	..	..	..
St. George's	111	368	18	4	4	..
St. John's	106	251	..	1	1	..
St. Luke's	289	320	27	..	..	..
St. Mark's	9	21	..	..	..	..
St. Michael's	130	543	..	..	..	..
Withington	3	6	..	..	..	..
TOTALS	2,115	3,795	113	32	20	12

TABLE SHOWING THE NUMBER OF CASES IN WHICH MAGISTERIAL PROCEEDINGS WERE TAKEN AND THE RESULT OF SAME.

OFFENCE	Number of Summonses taken out	Number in which Fines were imposed	Number in which Costs only were ordered to be Paid	Number excused, dismissed, or withdrawn	Amount of Fines imposed	Amount of Costs ordered to be Paid
						£ s. d.
Dirty Lodging House	4	4	..	..	1 0 0	..
Lodging-house overcrowded	12	8	1	3	3 5 0	0 5
Keeping Animals in such a state	1	1	..	..	0 5 0	..
Mixing of Sexes	3	2	1	..	0 10 0	0 5
TOTALS	20	15	2	3	5 0 0	0 10

TABLE NO. IOA.

SUMMARISED REPORT OF WORK DONE BY DISTRICT SANITARY INSPECTORS,  
YEAR ENDING 31ST DECEMBER, 1927.

COMPLAINTS RECEIVED FROM					
Medical Officer of Health	3,621	H. M. Inspector of Factories	58		
Sanitary Inspectors	1,104	Police	54		
Cleansing Department	556	Public	6,719		
Surveyor's Department	66	Anonymous	66		
		TOTAL	12,244		
INSPECTIONS	1st Inspections	Re-inspections	INSPECTIONS	1st Inspections	Re-inspections
dwelling Houses under House-to-House Inspection, Housing and Town Planning Acts, 1919 and 1923	7,465	4,999	Cellars	13	3
dwelling Houses	16,927	38,338	Houses let in lodgings	105	3,803
Business Premises	1,028	3,768	Slaughter Houses	..	7
Residential Trades	8	3,953	Tips for Refuse	7	615
Schools	35	79	Parks, etc.	2	638
Tables	15	10,588	New Buildings	1,323	2,498
			Miscellaneous	2,344	1,755
			TOTAL	29,273	71,044
INVESTIGATIONS re INFECTIOUS DISEASES.					
Smallpox	1	Erysipelas	318	Smallpox Contacts	3,487
Scarlet Fever	1,915	Chicken Pox	3,699	Scarlet Fever Contacts	157
Malaria	8	Malaria	7		
Bacteriology	1,293	Encephalitis Lethargica	84		
Other	25	Others	46		
		TOTAL	7,396	TOTAL	3,644
Number of Patients removed to Hospital	2,606	Inspections of Infected Houses	..	..	7,013
Number of Rooms Disinfected by Corporation	4,229	Re-inspections of Infected Houses	..	..	22,816
Number of Rooms Disinfected by Tenants	7,605				
Number of Drains Tested by Water	..	..	..	..	4,447
Number of other Visits (not inspections)	..	..	..	..	11,308
Number of Premises entered for Examination of Drains, Water Closets, etc.	..	..	..	..	452
			Number registered during the year	Number removed or discontinued during the year	Total number on Register at end of year
Shops	654	490	19,677		
Workshops	112	154	2,984		
Tenements	21	23	667		
Houses let in lodgings	78	105	3,676		
Residential Trades	111	127	2,115		
Tables	77	33	843		
	40	114	1,258		

TABLE NO. 10A.—*continued.*

ACTS OF PARLIAMENT, &c.	WORK REQUIRED TO BE DONE	Number of Notices, &c., Outstanding Previous year, ending 31st Dec., 1926		Total Number of Notices, &c., complied with. Outstanding from previous year, ending 31st Dec., 1925		Total Number of Notices served since 31st Dec., 1926		Total Number of Notices compiled with since 31st Dec. 1926, including Outstanding Notices	
		Notices	Premi's	Notices	Premi's	Notices	Premi's	Notices	Premi's
P.H.A., 1875, S. 41, and P.H.A. Amendment Act, 1890, S. 19	Reconstruction of drains..	260	1,001	188	717	223	544	318	1,000
P.H.A., 1875, S. 23 .. . . .	Provide sufficient drains ..	20	53	9	40	32	70	31	53
Manchester Improvement Act, 1845, S. 46	Open, cleanse, &c., drains	113	116	113	116	926	1,116	889	950
P.H.A., 1875, S. 36 .. . . .	Provide ashbins, repair water closets, &c.	23	88	82	87	377	451	409	450
P.H.A., 1875, S. 91 .. . . .	To abate nuisances .. . .	82	166	68	152	215	217	219	219
Manchester Corporation Water-works and Improvement Act, 1869, S. 29	Renew defective down-spouts and gutters	155	239	153	219	890	1,167	861	1,000
Manchester New Streets Act, 1853, S. 41	Flagging of yards and passages	116	258	64	177	291	998	199	500
Manchester New Streets Act, 1853, S. 41, and Manchester Corporation Act, 1891, S. 38	Repairs to surfaces of yards and passages	245	715	211	595	1,110	2,264	995	1,000
P.H.A. Amendment Act, 1907, S. 49	Provide sinks and drains, &c.	..	..	..	..	2	2	2	2
Manchester Corporation Water-works and Improvement Acts, 1867-1869	Repairs to privies, &c. ..	95	115	94	108	416	526	422	422
Housing and Town Planning Acts, 1919 and 1923	General repairs to houses, Internal and external	66	69	62	62	148	213	164	164
Manchester Corporation Water-works and Improvement Act, 1869, S. 31	Discontinue keeping swine	..	..	..	..	..	..	..	..
Manchester Police Act, 1844, S. 86	Cleanse and limewash houses	3	3	3	3	94	94	89	89
P.H.A., 1875, S. 91 to 94, Factory and Workshops Acts, 1878 to 1901	To remedy defects in workshops	3	3	3	3	28	28	29	29
Factory and Workshops Act, 1901, S. 2, and P.H.A., 1875	Cleanse and limewash workshops	..	..	..	..	11	11	10	10
P.H.A., 1875, S. 49 .. . . .	Removal of manure .. . .	..	..	..	..	..	..	..	..
Manchester New Streets Act, 1853	To close cellar dwellings..	..	..	..	..	..	..	..	..
Not issued under any Act of Parliament	Preliminary notice for general repairs, internal and external	650	1,138	638	1,101	3,349	5,244	3,125	4,000
Factory and Workshops Act, 1901, S. 15, and Bye-laws made thereunder	Provide adequate means of escape in case of fire	3	3	1	1	18	20	13	13
Factory and Workshops Act, 1901, S. 14 (2) (Factory erected before 1892.)	Ditto .. . . . .	..	..	..	..	..	..	..	..
Bye-laws .. . . . .	workshop before 1896.) Removal of horse manure and provision of manure steeds	14	11	14	11	24	20	38	38
	Houses let in lodgings ..	11	10	11	10	155	155	154	154
	Tents, vans, &c. .. . .	22	25	20	24	92	83	103	103
	TOTALS ..	1,941	4,013	1,734	3,426	8,401	13,223	8,070	12,000

TABLE NO. IOA.—*continued.*

REPORTS TO OTHER COMMITTEES	Reports	Premises	REPORTS SENT TO	Reports	Premises
Cleansing—			Medical Officer of Health .. . .	5,465	4,342
Ashbins require renewal .. . .	1,779	1,866	City Architect .. . . . .	568	1,043
Ashpits require emptying .. . .	8	10	City Engineer .. . . . .	126	254
Receptacles require emptying .. .	12	23	City Surveyor .. . . . .	310	1,028
Ashplaces left dirty after emptying.	2	3			
Streets, courts, and passages require cleansing	79	..	TOTAL .. . . .	6,469	6,667
Soughs stopped in streets, courts, and passages	1,351	..			
Miscellaneous reports .. . . . .	104	63			
Waterworks (burst pipes, &c.) .. .	976	1,263			
Highways (settling, &c., in streets, paving of streets and passages, projections, &c.)	687	32			
Gas (escape of gas, &c.) .. . . .	67	63			
Markets .. . . . .	1	1			
Watch .. . . . .	9	11			
Alvers .. . . . .	5	..			
rainage .. . . . .	57	123			
	TOTAL .. . . . .	5,137	3,458		
			TOTAL .. . . . .		183
Notices referred to Drainage Sub-Committee in default of compliance by owner .. . . . .					708
Number of letters sent asking for work to be done .. . . . .					3,868
Number of letters complied with .. . . . .					2,254

## FACTORY AND WORKSHOPS AND SHOPS ACTS.

SHOPS		FACTORIES AND WORKSHOPS					BAKEHOUSES				
Number visited	Number of infringements reported to Committee	Number visited	Number in which the sanitary arrangements were found defective	Not provided with proper means of escape in case of fire	Means of escape in case of fire not being maintained in accordance with the requirements of the Act	Reports referred to H.M. Inspector of Factories	Number of infringements reported to Committee	Number visited	Number in which the sanitary arrangements were found defective	Reports referred to H.M. Inspector of Factories	Infringements reported to Committee
19,122	243	4,338	45	40	37	89	1	1,440	5	2	1

In addition to the above, 13,916 visits (Shops, 2,223; Factories and Workshops, 3,003; Outworkers, 8,690) were made by the two Female Factory and Workshops Inspectors.

TABLE NO. II.—SHOWING THE PROCEEDINGS TAKEN UNDER THE DIRECTION OF THE NUISANCE SUB-COMMITTEE FOR THE ABATEMENT OF NUISANCES FROM BLACK SMOKE.

INSPECTOR	Number of Observations Made	Number of Mills, etc., Visited	Number of Notices Served	Number Cautioned by Inspector under Two Minutes' Black Smoke
M. C. WAITE .. . . . .	330	247	52	80
A. E. CROSSLEY .. . . . .	238	247	36	42
S. M. SMITH .. . . . .	241	220	30	85
A. BRADSHAW .. . . . .	138	215	19	95
TOTALS .. . . . .	947	929	137	302

*Offences reported to Nuisance Sub-Committee.*

OFFENCE	Number of Cases Reported	Number ordered to be Summoned	Number Cautioned	Number Excused
Allowing black smoke to be emitted from chimneys of works after notice	14	14	..	..
Neglecting to comply with Magistrates' Order to abate nuisance from offensive smoke	153	120	33	..
TOTALS .. . . . .	167	134	..	..

*Magisterial Proceedings.*

OFFENCE	Number Summoned	Number Fined	Ordered to pay Costs only	Magistrates' Orders Issued	Number Withdrawn	Number Dismissed	Amount of Fines £ s. d.	Amount of Costs £ s. d.
Allowing black smoke to be emitted from chimneys of works	14	..	..	14	..	..	..	5 12 0
Neglecting to comply with Magistrates' Order to abate nuisance from offensive smoke	120	111	1	..	3	5	238 10 0	0 5 0
TOTALS .. . . .	134	111	1	14	3	5	238 10 0	5 17 0

TABLE NO. 12.—SHOWING THE PROCEEDINGS TAKEN UNDER THE PROVISIONS OF THE ADULTERATION OF FOOD AND DRUGS AND THE MARGARINE ACTS DURING 1927.

ARTICLE	Number of Samples obtained	Number Adulterated	Number not Adulterated	Number Summoned before Magistrates	Number Fined	Number ordered to pay Costs only	Number Dismissed or Withdrawn	Number Cautioned by Committee	No. of Samples slightly Adul't'd or Informal	Amount of Fines Imposed	Amount of Costs ordered to be Paid
Wroot and Corn Flour..	12	..	12	..	..	..	..	..	..	..	..
Milk ..	24	..	24	..	..	..	..	..	..	..	..
ing Powder ..	13	..	13	..	..	..	..	..	..	..	..
Dripping ..	41	..	41	..	..	..	..	..	..	..	..
Oil ..	13	..	13	..	..	..	..	..	..	..	..
er ..	25	..	25	..	..	..	..	..	..	..	..
borated Oil ..	20	1	19	..	..	..	..	..	..	..	..
ar Oil ..	12	..	12	..	..	..	..	..	..	..	..
re ..	15	..	15	..	..	..	..	..	..	..	..
..	12	..	12	..	..	..	..	..	..	..	..
..	24	..	24	..	..	..	..	..	..	..	..
Liver Oil ..	12	..	12	..	..	..	..	..	..	..	..
ce and Coffee Essence ..	50	..	50	..	..	..	..	..	..	..	..
ctionery and Mincemeat ..	152	..	152	..	..	..	..	..	..	..	..
n and Preserved Cream ..	39	5	34	..	..	..	..	3	2	..	..
s ..	335	9	326	6	6	..	..	2	1	4 15 0	5 15 6
..	65	..	65	..	..	..	..	..	..	..	..
(Tinned and Potted) ..	27	..	27	..	..	..	..	..	..	..	..
(Tinned) ..	12	..	12	..	..	..	..	..	..	..	..
ream ..	6	..	6	..	..	..	..	..	..	..	..
ts' Food ..	5	..	5	..	..	..	..	..	..	..	..
..	28	1	27	..	..	..	..	..	1	..	..
up and Sauces ..	9	..	9	..	..	..	..	..	..	..	..
..	4	..	4	..	..	..	..	..	..	..	..
rine ..	44	..	44	..	..	..	..	*2	..	..	..
Tinned and Prepared) ..	43	*2	41	..	..	..	..	..	..	..	..
ated Wines ..	80	1	79	..	..	..	..	1	..	..	..
..	6	..	6	..	..	..	..	..	..	..	..
Cond'sed & Evapora'd) ..	1217	87	1130	23	11	8	4	6	58	22 0 0 21 17 6	..
al Waters, Cordials, etc. ..	39	..	30	..	..	..	..	..	..	..	..
rd ..	68	4	64	..	..	..	..	..	..	..	..
al ..	12	..	12	..	..	..	..	..	..	..	..
Oil ..	16	..	16	..	..	..	..	..	..	..	..
Barley ..	17	..	17	..	..	..	..	..	..	..	..
..	17	..	17	..	..	..	..	..	..	..	..
..	18	..	18	..	..	..	..	..	..	..	..
Tapioca, etc. ..	7	..	7	..	..	..	..	..	..	..	..
..	48	..	48	..	..	..	..	..	..	..	..
Foot Oil ..	7	..	7	..	..	..	..	..	..	..	..
..	1	..	1	..	..	..	..	..	..	..	..
..	11	1	10	1	..	..	..	..	..	..	..
..	31	..	31	..	..	..	..	..	..	..	..
..	46	..	46	..	..	..	..	..	..	..	..
re and Golden Syrup ..	17	..	17	..	..	..	..	..	..	..	..
..	8	..	8	..	..	..	..	..	..	..	..
ables (Tinned) Prepared ..	6	..	6	..	..	..	..	..	..	..	..
er ..	16	2	14	1	1	..	..	..	..	0 10 0	0 10 6
..	28	..	28	..	..	..	..	..	..	..	..
reay ..	46	1	45	..	..	..	..	..	..	..	..
..	39	1	38	..	..	..	..	..	..	..	..
..	20	..	20	..	..	..	..	..	..	..	..
Dried) ..	11	..	11	..	..	..	..	..	..	..	..
Dried) ..	1	..	1	..	..	..	..	..	..	..	..
Fruit ..	72	..	72	..	..	..	..	..	..	..	..
..	18	..	18	..	..	..	..	..	..	..	..
<b>TOTALS</b> .. .. ..	<b>3028</b>	<b>116</b>	<b>2912</b>	<b>31</b>	<b>18</b>	<b>8</b>	<b>5</b>	<b>15</b>	<b>70</b>	<b>27 5 0</b>	<b>28 3 6</b>

addition to the above, 721 samples of milk have been procured from farmers' cans by the Sampling Officers, for biological examination, under the Milk Clauses of the Manchester General Powers Acts.

Private Purchaser.

\* Offences in respect to labelling and unstamped wrapper.

TABLE NO. 13.

## MILK AND CREAM REGULATIONS, 1912 AND 1917.

The following is a summary of the action taken under these regulations in 1927:—

I. *Milk and Cream not sold as Preserved Cream.*

	(a) Number of samples examined for the presence of a preservative	(b) Number in which a preservative was reported to be present
Milk . . . .	1217	—
Cream . . . .	13	5

Nature of preservative in each case in column (b) and action taken under the Regulations in regard to it. (See table below.)

Article	No. of Sample	Formal or Informal	Result of Analysis	Action taken
Cream . .	476	Formal	Contained 0·10 per centum of Boric Acid	Cautioned by Medical Officer Health
Do. . .	460	Informal	Contained 0·20 per centum of Boric Acid	Follow up sample taken and found to be genuine
Do. . .	1888 C	Formal	Contained 0·30 per centum of Boric Acid	Cautioned by Medical Officer Health
Do. . .	1902 C	Formal	Contained 0·24 per centum of Boric Acid	Cautioned by Medical Officer Health
Do. . .	1679 C	Informal	Contained 0·31 per centum of Boric Acid	Follow up sample taken. (See 1888 and 1902 C)

**2. Cream sold as Preserved Cream.**

(A) Instances in which samples have been submitted for analysis to ascertain if the statements on the labels as to preservatives were correct :—

(1) Correct statements made .. . . . .	24
(2) Statements incorrect .. . . . .	..
Total .. . . . .	24

(B) Determination made of milk fat in cream sold as preserved cream :—

(1) Above 35 per cent. .. . . . .	24
(2) Below 35 per cent. .. . . . .	..
Total .. . . . .	24

(C) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V. (1) and the proviso in Article V. (2) of the Regulations have not been observed.

(D) Particulars of each case in which the Regulations have not been complied with and action taken.

Answers to Question 2 (c and d).—None.

**3. Thickening Substances.**—Any evidence of their addition to cream or to preserved cream. Action taken where found.—None.

**4. Other Observations, if any.**—None.

TABLE NO. 14.  
CLOSET ACCOMMODATION.

The following table shows the manner in which the conversion was effected from pails and middens in the City to water-closets. This conversion was accompanied by the necessary alterations in house drains, passage drains, paving of passages, and in the houses themselves. These alterations cannot be exhibited in tabular form, at all events so far as drainage and paving is concerned.

RETURN OF PAIL-CLOSETS AND MIDDEN-PRIVIES ALTERED TO WATER-CLOSETS.

			Number of Pail Closets altered to Water-Closets	Number of Midden-Privies altered to Water-Closets	Number of Slop Water-Closets altered to Water-Closets
From April 1st, 1891, to March 31st, 1892			16	39	—
" "	1892,	"	1893	98	100
" "	1893,	"	1894	138	141
" "	1894,	"	1895	179	89
" "	1895,	"	1896	185	119
" "	1896,	"	1897	197	284
" "	1897,	"	1898	179	405
" "	1898,	"	1899	136	960
" "	1899,	"	1900	249	897
" "	1900,	"	1901	180	1,327
" "	1901,	"	1902	385	999
" "	1902,	"	1903	976	1,282
" "	1903,	"	1904	1,899	1,379
" "	1904,	"	1905	2,222	1,691
" "	1905,	"	1906	3,297	*2,600
" "	1906,	"	1907	3,746	3,662
" "	1907,	"	1908	1,296	918
" "	1908,	"	1909	10,081	2,844
" "	1909,	"	1910	11,296	1,378
" "	1910,	"	1911	8,552	1,204
" "	1911,	"	1912	6,970	*3,180
" "	1912,	"	1913	4,214	533
" "	1913,	"	1914	1,420	78
" "	1914,	"	1915	428	61
" "	1915,	"	1916	155	14
" "	1916,	"	1917	29	6
" "	1917,	"	1918	3	—
" "	1918,	"	1919	76	13
" "	1919,	"	1920	1	—
" "	1920,	"	1921	2	—
" "	1921,	"	1922	14	—
" "	1922,	"	1923	10	—
" "	1923,	"	1924	56	—
" "	1924,	"	1925	15	—
" "	1925, to Dec. 31st,	1925		4	—
" Jan. 1st, 1926,	"	1926		—	—
" "	1927,	"	1927	17	—
Total	...	...	58,721	26,203	* 553
				85,477	

\* Extension of City Boundaries.

TABLE NO. 15.  
HOUSING PARTICULARS FOR THE CITY OF  
MANCHESTER.

The figures are summarised below.

The number of houses certified to, and dealt with by, the Housing Sub-Committee, from February, 1885, to December 31st, 1927:—

	Number Certified and ordered to be Closed *	Number of Houses added together or to other Houses	Number Demolished	Number Repaired and Reopened	Number Closed	Number not Closed	Number which stand Adjourned
Totals.. ..	27,459	3,389	7,033	13,670	1,241	2,036	90

\* This work is carried out under a Local Act.

Owing to the prevailing conditions with regard to housing shortage, only six houses have been certified by the Chief Inspector as unfit for human habitation during the year 1927, one of which has been closed.

The number of conversions from pail-closets and midden-privies to water-closets is given herewith :—

From April 1st, 1903, to December 31st, 1927 .. .. .. 75,364  
 From January 1st, 1927, to December 31st, 1927 .. .. .. 17

The numbers still requiring to be replaced are—middens, 35 ; pail-closets, 1,108. The number of water-closets in Manchester is estimated (at December 31st, 1927) to be 242,197, of which 189,517 are in houses, and 52,680 are in warehouses, workshops, etc.

## HOUSING CONDITIONS—YEAR ENDED 31ST DECEMBER, 1927.

## General Statistics.

Number of new houses erected during the year:—

(a) Total (including numbers given separately under (b)) .. 4,461

(b) With State assistance under the Housing Acts—

(ii.) By other bodies or persons .. .. .. .. .. .. .. 2,22I

### I. *Unfit Dwelling-houses.*

Inspection—(i) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts) \*23,944 †61,150

(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation

(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation .. . . . . 3,116

\* First inspection    † Re-inspection.

TABLE NO. 15—continued

### *General Statistics*—continued

## **2. Remedy of Defects without Service of Formal Notices.**

### *3. Action under Statutory Powers.*

(A) Proceedings under Section 3 of the Housing Act, 1925.

(1) Number of dwelling-houses in respect of which notices were served requiring repairs .. . . . .	213
(2) Number of dwelling-houses which were rendered fit after service of formal notices—	
(a) By owners .. . . . .	184
(b) By Local Authority in default of owners .. . .	23
(3) Number of dwelling-houses in respect of which closing orders became operative in pursuance of declarations by owners of intention to close.. . . . .	None

(B) *Proceedings under the Public Health Acts.*

(c) Proceedings under Sections 11, 14, and 15 of the Housing Act, 1925.

(1) Number of representations made with a view to the making of closing orders .. . . . . . . . . . .	None
(2) Number of dwelling-houses in respect of which closing orders were made .. . . . . . . . . . .	None
(3) Number of dwelling-houses in respect of which closing orders were determined, the dwelling-houses having been rendered fit .. . . . . . . . . . .	None
(4) Number of dwelling-houses in respect of which demolition orders were made .. . . . . . . . . . .	None
(5) Number of dwelling-houses demolished in pursuance of demolition orders .. . . . . . . . . . .	None

## HOUSING AND TOWN PLANNING ACTS.

TABLE SHOWING THE CLASSIFICATION OF HOUSES INSPECTED IN EACH DISTRICT DURING THE PERIOD  
FROM 1ST JANUARY, 1927, TO 31ST DECEMBER, 1927.

DISTRICT	Number of Houses Inspected	Number of Rooms						Good	Minor Defects	Serious Defects	Business Premises	
		1	2	3	4	5	6				Part	Total
		8	17	259	3	..	..				..	..
All Saints ..	466	..	..	..	..	..	..	62	237	16	5	2
Ardwick ..	600	..	..	..	..	..	..	6	50	37	36	..
Beswick ..	173	..	..	..	..	..	..	15	41	119	2	..
Blackley ..	367	..	..	..	..	..	..	1	195	131	1	..
Bradford ..	266	..	..	..	..	..	..	..	155	16	..	..
Cheetham ..	79	..	..	..	..	..	..	..	..	..	..	..
Chorlton-cum-Hardy ..	279	..	..	..	..	..	..	..	..	..	..	..
Collegiate Church ..	337	..	..	..	..	..	..	..	..	..	..	..
Collyhurst ..	291	..	..	..	..	..	..	..	..	..	..	..
Crumpsall ..	42	..	..	..	..	..	..	..	..	..	..	..
Didsbury ..	428	..	..	..	..	..	..	..	..	..	..	..
Exchange ..	304	..	..	..	..	..	..	..	..	..	..	..
Gorton North ..	132	..	..	..	..	..	..	..	..	..	..	..
Gorton South ..	357	..	..	..	..	..	..	..	..	..	..	..
Harrowby ..	31	..	..	..	..	..	..	..	..	..	..	..
Levenshulme ..	312	..	..	..	..	..	..	..	..	..	..	..
Longsight ..	198	..	..	..	..	..	..	..	..	..	..	..
Medlock Street ..	29	..	..	..	..	..	..	..	..	..	..	..
Miles Platting ..	149	..	..	..	..	..	..	..	..	..	..	..
Moston ..	265	..	..	..	..	..	..	..	..	..	..	..
Moss Side East ..	106	..	..	..	..	..	..	..	..	..	..	..
Moss Side West ..	346	..	..	..	..	..	..	..	..	..	..	..
New Cross ..	20	..	..	..	..	..	..	..	..	..	..	..
Newton Heath ..	263	..	..	..	..	..	..	..	..	..	..	..
Openshaw ..	78	..	..	..	..	..	..	..	..	..	..	..
Oxford ..	37	..	..	..	..	..	..	..	..	..	..	..
Rusholme ..	201	..	..	..	..	..	..	..	..	..	..	..
St. Ann's ..	10	..	..	..	..	..	..	..	..	..	..	..
St. Clement's ..	1	..	..	..	..	..	..	..	..	..	..	..
St. George's ..	4	..	..	..	..	..	..	..	..	..	..	..
St. John's ..	20	..	..	..	..	..	..	..	..	..	..	..
St. Luke's ..	10	..	..	..	..	..	..	..	..	..	..	..
St. Mark's ..	55	..	..	..	..	..	..	..	..	..	..	..
St. Michael's ..	295	..	..	..	..	..	..	..	..	..	..	..
Withington ..	39	..	..	..	..	..	..	..	..	..	..	..
	6,426	2	122	816	2,746	1,801	655	284	2,676	2,834	292	470

**TABLE B.**  
**HOUSING AND TOWN PLANNING ACTS.**

GENERAL CHARACTER OF THE HOUSES INSPECTED IN EACH DISTRICT DURING THE PERIOD  
FROM 1ST JANUARY, 1927, TO 31ST DECEMBER, 1927.

## CITY OF MANCHESTER.

TABLE C.—HOUSE TO HOUSE INSPECTIONS, 1927.

*This Table is comparable with figures given in the Census Report, 1911.*

No. of Rooms per Tenement	No. of Individuals in Private Families or Tenements			No. of Individuals per Room			Overcrowding			Registrars- General's Standard	Man- chester Standard	Social Standard
	Families or Tenements	Population	Individuals per Family or Tenement	Rooms	Population	Individuals per Room	Families or Tenements	Children under 10	Children per Family or Tenement			
One .. .	2	6	3·0	2	6	3·0	2	3	1·5	Nil	Nil	Nil
Two .. .	122	418	3·4	244	418	1·7	122	136	1·1	30	62	26
Three .. .	816	3,567	4·3	2,448	3,567	1·5	816	852	1·0	111	212	208
Four .. .	2,746	11,602	4·2	10,984	11,602	1·1	2,746	2,392	0·9	84	639	738
Five .. .	1,801	7,591	4·2	9,005	7,591	0·8	1,801	1,053	0·6	11	175	28
Six .. .	655	2,908	4·4	3,930	2,908	0·7	655	435	0·7	5	57	9
Seven .. .	182	902	5·0	1,274	902	0·7	182	115	0·6	3	14	3
Over Seven, 102	691	6·8	—	—	—	—	102	97	1·0	3	9	5
TOTALS	6,426	27,685	4·3	27,887	26,994	1·0	6,426	5,083	0·8	247	1,168	1,017

TABLE NO. 16.

SHOWING THE AMOUNTS RECEIVED FOR THE USE OF THE  
DURING THE FINANCIAL YEAR

SITUATION OF CONVENIENCE	Cost of Construction	Wages and Clothing	Gas, Water, Repairs, etc.	Amount received for use of Water-closets	Amount received for use of Lavatories
Albert Square (Males) . . . . .	£ 948 7 10	£ 413 16 5	£ 148 6 6	£ 243 1 2	£ 54 9 4
Victoria Buildings (Females) . . . . .	630 6 10	544 12 0	175 10 3	814 0 0	73 2 8
Piccadilly . . . . .	{ Females .. 887 12 9 Males .. 1384 14 5	324 14 6 663 0 1	262 12 6 376 1 1	796 9 1 611 16 4	60 0 8 254 0 10
Market Place (Males) . . . . .	1035 9 5	363 8 7	168 19 11	311 6 3	120 14 8
South Street (Males) . . . . .	1615 7 6	361 14 3	99 16 3	95 11 0	41 5 0
a Great Bridgewater Street (Males) . . . . .	1711 18 9	401 3 0	148 4 11	185 5 5	108 14 4
Victoria Street (Males) . . . . .	2196 15 3	414 18 8	226 0 7	255 9 1	95 12 0
New Cross . . . . .	{ Females .. 1655 5 5 Males .. 1755 5 1	243 10 11 427 7 7	116 2 2 235 17 7	198 2 5 174 5 6	18 14 2 56 11 2
Stevenson Square . . . . .	{ Females .. 1605 16 11 Males .. 1724 16 11	243 5 0 393 0 4	144 3 4 153 4 10	312 12 1 187 2 0	14 8 0 63 4 10
b Blackley (Females) . . . . .	959 8 9	..	99 15 5	..	..
Blackley (Males) . . . . .	1026 12 9	292 4 8	96 3 0	16 7 6	3 2 4
c Corporation Street (Males) . . . . .	2364 10 9	371 18 1	88 8 11	57 17 5	17 17 2
Withington (Females) . . . . .	267 14 6	232 11 5	68 3 2	93 16 7	2 3 2
Lloyd's Hotel, Chorlton-cum-Hardy . . . . .	..	..	4 14 10	6 4 10	..
Shudehill (Males) . . . . .	1631 9 3	351 19 1	176 16 11	115 18 2	30 17 0
Longsight (Males) . . . . .	260 14 1	..	16 9 4	43 5 5	..
Ardwick Green (Females) . . . . .	605 10 7	237 11 1	49 19 3	93 17 0	14 5 0
d Brooks's Bar . . . . .	{ Females .. 112 16 10 Males .. 112 16 10	254 2 3 ..	48 7 8 37 16 10	28 2 9 10 10 4	0 8 6 ..
e Gorton Lane . . . . .	{ Females .. 201 19 10 Males .. 201 19 10	189 16 8 ..	49 19 11 48 15 4	9 4 7 16 0 9	0 3 4 ..
f Moston Lane . . . . .	{ Females .. 230 14 6 Males .. 230 14 6	35 10 8 35 10 8	29 14 10 26 16 9	3 7 4 ..	..
g Southern Cemetery . . . . .	{ Females .. 405 18 8 Males .. 405 18 8	6 10 0 6 10 0	12 16 11 11 10 7	13 13 7 5 6 0	..
h Barlow Moor Road . . . . .	{ Females .. 270 0 0 Males .. 270 0 0	.. ..	27 10 2 28 8 3	42 15 5 21 3 4	..
i Levenshulme (Females) . . . . .	249 10 4	227 4 2	69 1 9	49 1 6	0 18 4
Levenshulme (Males) . . . . .	249 10 3	9 2 0	57 19 7	21 18 11	..
j Gorton Town Hall (Females) . . . . .	550 0 0	125 1 10	71 12 10	63 18 1	0 8 6
k Gorton Town Hall (Males) . . . . .	820 0 0	..	21 1 8	36 14 9	..
North Road (Females) . . . . .	521 4 9	13 0 0	10 19 9	8 2 2	..
Queen's Road . . . . .	{ Females .. 555 0 11 Males .. 555 0 11	10 15 0 ..	12 11 1 12 3 4	18 16 3 16 19 6	..
West Point . . . . .	{ Females .. 644 6 10 Males .. 644 6 9	1 10 0 1 10 0	1 3 1 1 3 1	2 9 4 2 2 6	..
TOTALS . . . . .	31499 18 2	7196 18 11	3435 4 2	4982 14 4	1031 1 0

a Includes £15 paid by the L.M. & S. Railway Company for damage to Convenience.

b This Convenience was let with the shop at a rental of £30 per annum and rates, the Public Health Committee undertaking to pay for gas, water, and electricity.

c Tramways Committee pay 7s. 6d. per week for privileges extended to Tramways employees at this Convenience.

d Tramways Committee pay half cost of construction (except Barlow Moor Road Conveniences, the amount stated being the cost apportioned to the Public Health Committee) and working expenses, and receive half receipts.

UNDERGROUND CONVENIENCES, AND THE WORKING EXPENSES, ETC.,  
ENDED 31ST MARCH, 1928.

Amount received for let Parcels	Amount received from sale of Sanitary Towels	Commission on Receipts from Weighing Machines	Number of occasions Waterclosets have been used	Number of Persons who have paid for use of Lavatories	Total Receipts		Total Expenditure		Surplus	Deficit	
					£	s.	d.	£	s.	d.	
204 19 8	17 17 4	..	58,334	6,536	305	17	0	562	2	11	..
63 1 10	7 5 2	5 7 5	191,149	7,204	932	4	2	587	7	0	344 17 2
201 2 0	..	25 14 7	146,836	30,485	1092	13	9	1039	1	2	53 12 7
..	..	71 3 5	74,715	14,488	439	14	4	532	8	6	..
..	..	4 15 10	22,932	4,950	141	11	10	461	10	6	..
..	..	10 11 8	44,465	13,046	319	11	5	549	7	11	..
95 15 8	..	6 13 6	61,309	11,472	453	10	3	640	19	3	..
10 11 6	1 18 10	19 ..	47,549	2,245	229	6	11	359	13	1	..
..	..	7 5 5	41,826	6,787	250	4	1	663	5	2	..
28 7 0	4 1 10	7 ..	75,025	1,728	359	8	11	387	8	4	..
66 3 8	..	7 2 11	44,904	7,589	323	13	5	546	5	2	..
..	..	..	..	..	30	0	0	99	15	5	..
..	..	5 18 2	3,930	374	25	8	0	388	7	8	..
10 19 0	..	6 10 6	13,889	2,143	112	14	1	460	7	0	..
41 2 7	..	..	22,519	259	137	2	4	300	14	7	..
..	..	..	1,498	..	6	4	10	4	14	10	1 10 0
38 7 10	..	3 15 7	27,818	3,702	188	18	7	528	16	0	..
..	..	..	10,385	..	43	5	5	16	9	4	26 16 1
7 16 2	..	0 19 11	22,524	1,710	116	18	1	287	10	4	..
..	..	2 16 9	6,753	51	31	8	0	302	9	11	..
..	..	1 18 9	2,524	..	12	9	1	37	16	10	..
..	..	..	2,215	20	9	7	11	239	16	7	..
..	..	..	3,849	..	16	0	9	48	15	4	..
..	..	..	808	..	3	7	4	65	5	6	..
..	..	..	..	..	..	..	..	62	7	5	..
..	..	6 18 3	3,289	..	13	13	7	19	6	11	..
..	..	..	1,272	..	12	4	3	18	0	7	..
..	..	7 ..	10,265	..	42	15	5	27	10	2	..
..	..	7 9 6	5,080	..	28	12	10	28	8	3	15 5 3
8 5 6	..	0 13 6	11,778	110	98	18	10	296	5	11	..
..	..	7 9 0	5,267	..	29	7	11	67	1	7	..
..	..	2 13 10	15,337	51	67	0	5	196	14	8	..
..	..	..	8,817	..	37	14	9	21	1	8	16 13 1
..	..	0 15 9	1,946	..	8	17	11	23	19	9	..
..	..	0 19 5	4,515	..	19	15	8	23	6	1	..
..	..	6 8 6	4,074	..	23	8	0	12	3	4	11 4 8
..	..	0 4 6	592	..	2	13	10	2	13	1	0 0 9
..	..	1 1 6	510	..	3	4	0	2	13	1	0 11 11
776 12 5	31 3 2	152 6 8	1,195,852	123,726	7079	†	7	10657	9	1	860 13 6
				1,319,578							4003 9 0
											860 13 6
											Deficit .. 3542 15 6

e Ceased to be a tramway shelter 30/6/27, from which date the Public Health Committee took over complete control.

<sup>f</sup> Includes £40 rent received for portion of premises.

*g* Includes £40 rent received for portion of premises.  
*g* Includes £1 received for damage to coping stone.

† Includes £1 received for damage to coping stone.  
‡ Includes £25 1s. received for sale of unclaimed articles left in Public Conveniences and 5s. for sale of old metal.

TABLE No. 17.  
*Showing the work done by the Drainage Department.*

DATES	Total Number of Orders received	Number of Orders executed	Number of Orders—Work in Progress	Number of Houses included in the Orders	Number of Businesses Premises, Public Buildings, etc.	Number of Orders cancelled on account of property	Housing and Unhealthy Dwellings Committee	Number of Owners of Properties received from Owners of Orders received	Number of Orders received from Public Health Committee and other Committees	Total number of premises dealt with under such Orders	Total Cost of Work Executed	Number of Owners	Highways Department City Fund Account	Appportioned to	Number of Orders received from the Drainage Department		
From January 1st, 1927, to December 31st, 1927 . . .	1,079	127	..	241	3	50	740	162	182	222	1,166	360	10,067	8 0	7,448	11 5	2,618 16 7
From the formation of Department, April, 1896, to December 31st, 1927 . . .	63,967	10,137	..	25,251	809	1,614	51,401	815	7,377	11,010	103,688	18,069	685,179	17 1	530,648	18 1	154,530 9 0

In addition to above, the Department has complied with 248 requests from owners for the supply of ashbins.

## STATEMENTS FROM THE MARKETS DEPARTMENT.

At the City Abattoir and Wholesale Meat Market the business has considerably increased during the past 26 years, as is shown in Statement "A" attached.

The bulk of the meat, fish, fruit, etc., which is condemned is found to be unfit for food on arrival at the markets, railway stations, wholesale houses, etc., and by the system which operates of carrying out an efficient inspection at the centre of distribution, the risk of diseased meat, etc., being exposed in retail shops is lessened.

Statement "B" shows the total condemnations in the City, and Statement "C" the total weight of meat condemned at the City Abattoir.

*Statement "A."*

## ANIMALS SLAUGHTERED AT CITY ABATTOIR DURING CERTAIN YEARS.

Year ending 31st March	Cattle	Sheep	Lambs	Calves	Pigs
1900	34,675	106,855	45,595	872	18,163
1910	38,389	193,855	57,553	2,179	10,486
1920	89,143	214,363	48,656	8,202	9,636
1921	44,278	116,407	46,004	6,432	12,747
1922	53,348	232,581	57,159	5,359	19,601
1923	65,138	222,875	97,087	5,631	17,897
1924	55,332	192,906	78,739	3,364	15,662
1925	60,171	252,382	80,474	3,667	19,168
1926	54,027	271,127	76,460	5,192	16,106
1927	55,054	275,571	94,173	5,401	13,623

*Statement "B."*

## TOTAL CONDEMNATION OF VARIOUS FOODSTUFFS DURING CERTAIN YEARS.

	1920	1921	1922	1923	1924	1925	1926	1927
Meat .. . . . .	Tons 608	Tons 475 $\frac{1}{2}$	Tons 361 $\frac{3}{4}$	Tons 332 $\frac{1}{2}$	Tons 325 $\frac{1}{4}$	Tons 406 $\frac{1}{4}$	Tons 342	Tons 386 $\frac{1}{4}$
Fish .. . . . .	376 $\frac{1}{4}$	195 $\frac{1}{2}$	195 $\frac{1}{2}$	133 $\frac{3}{4}$	110	83 $\frac{1}{4}$	91 $\frac{1}{2}$	181 $\frac{1}{4}$
Fruit .. . . . .	80 $\frac{1}{2}$	79 $\frac{1}{4}$	30 $\frac{1}{2}$	55 $\frac{1}{4}$	61 $\frac{3}{4}$	85 $\frac{1}{4}$	74 $\frac{1}{4}$	72 $\frac{1}{2}$
Vegetables.. . . . .	103 $\frac{3}{4}$	83 $\frac{1}{2}$	93 $\frac{3}{4}$	82 $\frac{1}{4}$	64 $\frac{1}{2}$	207	261 $\frac{1}{2}$	149
Eggs (number)....	60,077	44,468	32,828	34,001	29,922	95,368	14,739	2,595
Game (head) ....	1,318	245	1,606	78	386	3,350	1,342	1,789
Poultry (head)....	2,635	3,099	5,769	4,332	6,192	4,870	4,712	5,695
Rabbits (head)....	57,735	64,814	54,319	13,842	19,021	20,611	14,290	12,861
,, (tinned)....	..	720 lbs.	..	..	..	..	..	..

*Statement "C."*

**MEAT CONDEMNED AT THE CITY ABATTOIR AND WHOLESALE MEAT MARKET  
DURING CERTAIN YEARS.**

	1920	1921	1922	1923	1924	1925	1926	1927
	Tons							
Total weight of meat condemned at the City Abattoir and Wholesale Meat Market ... .. .. ..	586½	425¾	310½	287½	293½	370½	311½	353½
Of which the weight of dressed meat consigned from places other than the City was .. .. .. ..	218½	247½	154¾	139½	168½	171½	121½	151½
Included in which were Imported Offals amounting to .. .. ..	10½	6½	7½	8½	2½	2½	5½	3½

**AMOUNT OF UNWHOLEsome FOOD CONDEMNED DURING THE YEAR ENDING  
31ST MARCH, 1927.**

	1925-26	1926-27
<b>MEAT :—</b>		
Beef .. .. .. .. .. .. ..	648,664	728,380
Mutton .. .. .. .. .. .. ..	28,799	40,104
Veal .. .. .. .. .. .. ..	13,377	21,592
Venison.. .. .. .. .. .. ..	71	282
Pork .. .. .. .. .. .. ..	63,243	66,933
Imported Offal .. .. .. .. ..	11,836	8,094
	765,990	865,385
	= 342 tons	= 386½ tons
<b>FISH :—</b>		
Fish .. .. .. .. .. .. ..	174,688	352,975
Shellfish .. .. .. .. .. .. ..	30,676	53,412
	205,364	406,387
	= 91½ tons	= 181½ tons

FOOD CONDEMNED DURING THE YEAR—*continued*

	1925-26	1926-27
GAME .. . . . . . . . . .	HEAD 1,342	HEAD 1,789
POULTRY .. . . . . . . . .	4,712	5,695
RABBITS .. . . . . . . . .	14,290	12,861
FRUIT .. . . . . . . . .	LBS. 166,623 = 74½ tons	LBS. 161,573 = 72½ tons
VEGETABLES.. . . . . . . . .	LBS. 586,135 = 261½ tons	LBS. 334,328 = 149 tons
MISCELLANEOUS :—	NO.	NO.
Eggs .. . . . . . . . .	14,739	2,595
Condensed Milk .. . . . . .	LBS. 2	LBS. 633
Sundry Provisions .. . . . .	907	3,913½

With the exception of the following, which were seized while deposited or exposed for sale, the above quantities were surrendered after being condemned by the Inspectors of the Department:—

	1925-26	1926-27
Meat .. . . . . . . . .	LBS. 1,806½	LBS. 441½
Fish .. . . . . . . . .	..	1,894
Fowl .. . . . . . . . .	..	I
Rabbits .. . . . . . . . .	..	I
Eggs .. . . . . . . . .	NO. 249	..
Fruit .. . . . . . . . .	..	LBS. 320

NOTE.—The term "surrendered" includes cases in which the Inspectors have discovered the diseased meat, etc., in the course of their duty, but in which, owing to salesman's acceptance of the Inspector's decision, it has been deemed unnecessary to obtain a magistrate's order prior to destruction.

**PARTICULARS RELATING TO THE OPERATIONS OF THE  
CLEANSING DEPARTMENT.**

The Medical Officer of Health is indebted to Mr. Williamson, Superintendent of the Cleansing Department, for the following particulars relating to the operations of the Cleansing Department during the year ending 31st March, 1927.

Cleansing Department,  
Town Hall, Manchester.

Dear Sir,

The administration of the Cleansing Department of the City of Manchester is under the supervision of a Superintendent, with a staff of about 74 officials and about 1,993 workmen.

The extent of the Department's operations may be gathered from the following general statistics :—

The gross expenditure of the Department during the year ended March 31st, 1927, was £439,481, and the gross income £79,050, the net cost being £360,431.

The wages of the Department for the year amounted to £308,855, including bonus.

For Departmental purposes the Cleansing of the City is divided into a Nightsoil Section and a Scavenging Section.

The work of the Nightsoil Section includes the emptying of old privies and pail closets and the collection and disposal of household refuse ; whilst the Scavenging Section deals principally with the cleansing of the streets and disposal of refuse collected therefrom.

*Nightsoil Section.*

There are within the City 166,110 dwelling-houses, 4,511 lock-up shops, 3,703 factories, and 3,695 workshops. From these premises during the past year there were collected and disposed of 197,709 tons of ashes, 9,721 tons of night-soil and pail contents, 25,980 tons of warehouse and trade refuse, 5,183 tons of slaughter-house refuse, 3,310 tons of stable manure, and 1,486 tons of fish refuse.

Previous to 1872 the midden-privy system was in operation, but the Corporation then decided upon the introduction of what is known as the pail-closet system, the scarcity of water preventing the adopting of the water-carriage method. Since the water difficulty has been solved the conversion of pail-closets into water-closets has been proceeded with, and is rapidly nearing completion. There are now only 80 privies and 1,148 pail-closets within the City.

In later years it was decided to replace the wooden ash-boxes by galvanized iron receptacles with lids, and there are now 187,242 of the latter ; the number of wooden ash-boxes being reduced to 520.

TABLE SHOWING NUMBERS OF PRIVIES, PAILS, ASH-BOXES, AND ASH-BINS  
FOR PERIOD 1912-1927.

Year	No. of Privies (with Ashpits)	No. of Pails	No. of Wooden Ash-boxes	No. of Galvanized Iron Ash-bins with Lids
1912	1,982	10,000	50,421	88,762
1913	292	3,850	41,645	101,239
1914	218	2,128	31,875	112,843
1915	157	1,710	24,677	121,191
1916*	236	1,671	16,653	142,107
1917	230	1,665	12,469	146,246
1918	230	1,633	11,230	147,616
1919	217	1,327	8,011	151,609
1920	217	1,326	4,827	153,962
1921	217	1,322	2,181	156,587
1922	217	1,310	1,681	160,347
1923	217	1,300	1,440	165,165
1924	217	1,244	1,140	168,905
1925	217	1,229	940	171,184
1926	217	1,225	716	183,930
1927	80	1,148	520	187,242

\* District of Withington incorporated.

The removal of domestic refuse takes place once a week.

The fleet of barges for removal of refuse is now 13.

Twelve motor and 46 horse-sweeping machines are employed on the streets, a total of 129,034 tons of sweepings, litter, etc., being collected as compared with 114,179 tons in 1926.

The receipts from mortar mills in 1926-27 was £3,333, compared with £3,796 in the previous year.

#### General.

The total weight of material dealt with by the Nightsoil and Scavenging Sections of the Department during the year was 385,250 tons, being equal to over 1,200 tons per working day.

TABLE SHOWING THE DISPOSAL OF MATERIAL COLLECTED TWELVE MONTHS  
ENDING MARCH, 1927.

	Tons	Tons
Town's Refuse to Department's Estates .. . . .	6,867	
"    "    Farmers .. . . . .	272	
"    "    (Pail contents) to Farmers .. . .	523	
	<hr/>	7,662
Garbage to Department's Estates .. . . . .	5,364	
Stable Manure to Department's Estates .. . . .	2,778	
	<hr/>	8,142
Clinkers to Department's Estates .. . . . .	10,141	
"    Contractors .. . . . .	6,315	
"    Allotments .. . . . .	265	
"    and Rubbish to Tip .. . . . .	78,141	
	<hr/>	94,862
Sweepings to Estates .. . . . .	19,840	
"    Farmers .. . . . .	504	
"    (rough) to Tips.. . . . .	47,829	
"    to Allotments .. . . . .	1,699	
	<hr/>	69,872
Rubbish (Ash-box Refuse) to Estates .. . . .	34,400	
Market Garbage to Farmers' Carts.. . . . .	25	
Concentrated Manure .. . . . .	854	
Sand on Streets .. . . . .	4,153	
Stone Clippings on Wood Pavements .. . . .	2,093	
Mortar .. . . . .	5,324	
Old Irons and Tins, Glass, Soap, Grease, and Waste		
Paper .. . . . .	1,221	
Burning and Drainage .. . . . .	156,642	
	<hr/>	385,250

The amount of refuse taken to the Carrington and Chat Moss Estates since they were purchased by the Corporation is as follows:—

Chat Moss Estate .. . . . . 1,497,251 tons in 29 years.

Carrington Estate .. . . . . 1,115,993     ,,     39     ,,

The number of farm tenants on these estates is 54, occupying 51 farmsteads and 3 extensive nurseries.

The Corporation erected the farmsteads, together with an adequate supply of town's water. There are 2 railway sidings on the estate and 2 wharves on the Ship Canal. The market value of the estates has considerably increased since their purchase, chiefly through cultivation and owing to the proximity of the Manchester Ship Canal.

R. WILLIAMSON,  
*Superintendent.*

**ARTICLES STOVED AT OLDHAM ROAD DEPOT, YEAR ENDING MARCH 31ST, 1928.**

Month ending	Blankets	Sheets	Pillows	Bolsters	Quilts	Mattresses	Beds	Carpets	Articles of Clothing	Sundry Articles	Totals
April 1927 ..	399	155	391	137	251	150	195	3	320	256	2,257
May ..	1,011	187	473	146	295	465	229	20	436	241	3,503
June ..	1,345	153	411	136	255	143	218	28	337	254	3,280
July ..	407	189	508	155	319	214	272	23	428	258	2,773
August ..	568	170	407	124	228	138	201	10	385	353	2,584
September ..	450	198	564	196	363	211	298	14	508	186	2,988
October ..	1,588	254	630	212	503	534	390	9	731	311	5,162
November ..	791	311	710	226	487	261	359	49	559	592	4,345
December ..	818	286	740	206	521	223	367	53	742	917	4,873
1928 January ..	746	273	706	220	509	234	333	55	779	547	4,402
February ..	538	221	529	194	405	175	279	21	613	405	3,380
March ..	825	292	763	221	508	240	336	10	740	550	4,485
	9,486	2,689	6,832	2,173	4,644	2,988	3,477	295	6,578	4,870	44,032

Steam Disinfector ..... 4L<sup>838</sup>

**Formic Aldehyde Chamber . . . . .** 1,118 | 450 Mattresses.  
668 Clothing.

1,076 Books

44.032 Total.

**VETERINARY AND MILK CONTROL DEPARTMENT.**

By LIEUT.-COL. J. W. BRITTLEBANK, C.M.G., M.R.C.V.S., D.V.S.M. (VICT.),  
*Chief Veterinary Officer.*

The chief feature of the year under review is the fact that we have been able to control, by sampling, a larger number of producers sending their milk into the City, an increase in the operation of which has been proved necessary by the fact that the percentage of tuberculous milk found during the year is 11·09, as compared with 10·33 in 1926.

This steady rise in the tuberculous milk rate, commented on previously, is a very disturbing feature and it would seem probable, from the indications available, that this increase will continue. It is probably true that the more we extend our operations the more tuberculous milk we shall find, particularly if the control extends to areas which may have just come into the City supply, a constant feature of the work, because the general area of which the milk supply is derived is subject to many small changes. But I am not satisfied that this should be a satisfactory explanation of the marked and steady increase in the amount of tuberculous infection found in milk entering the City. There is no special set of conditions that I am aware of to which any such increase can be attributed. It is true that the general farming conditions of the country are not satisfactory at the moment, but they are not such as necessarily conduce to any widespread increased infection. There is, for instance, no evidence of cattle being inadequately fed, nor is there any evidence of cattle being retained for any increased periods in the milking stocks, and I am bound to conclude that the real explanation is the removal of direct control which was exercised when the City had its powers to control its own sources of supply.

I referred at some length to the administration of the Tuberculosis Order in the country districts in my report for the year 1926, when I ventured to suggest that, generally speaking, the administration of the Order was unsatisfactory. Close observation, and a careful recording of all the facts, now goes to confirm what I then said. In many counties the Tuberculosis Order is entirely inoperative, except when invoked by the notification of a tuberculous milk found in the City or other large centre of population. There is no attempt at any general inspection of dairy animals, and, even when a notification of a suspected animal is received, I am informed that instructions in one county are that that animal, and that animal only, is to be examined.

There is no special feature in the administration of the Milk and Dairies (Consolidation) Act, 1915, which calls for any special comment. It is sufficient to say probably that each county has its own methods, and, so far as we are concerned, we have tried our best to fall in with their arrangements. It must be confessed, however, so much do these arrangements vary, and so different are the interpretations of the requirements of Section 4, that it is not always easy for us to get to the farms to see the inspections carried out. The Counties of Cheshire and Derbyshire, however, I must single out as having provided facilities which give a reasonable opportunity to all concerned to carry out the work, and as by far the largest percentage of our work lies in these counties, it is perhaps not necessary to unduly enlarge the difference in our work in other counties.

Dealing more particularly with areas of supply, the increase in the percentage of tuberculous milk is shown in the milk supplied from Lancashire and Cheshire. The figure for Derbyshire shows a considerable decrease, whilst that for Staffordshire is practically unchanged. These figures are not, however, a reliable guide to existing conditions in their respective counties, as they deal solely with the farms sending milk to Manchester from which samples have been taken. The method of taking of samples has not varied this year in its essentials, but a feature has been the large increase in milk coming by road in preference to rail. This has necessitated a stricter watch of supplies entering the City in this way, and owing to the many routes open the work of the Inspectors taking the samples has been increased, particularly as there has been no corresponding decrease in the number of samples taken at railway stations, but actually an increase of 20 per cent. on the figure for 1926.

In view of the somewhat disconcerting figures quoted above, it is gratifying to report a further large increase in the pasteurisation of milk in the City. Although only one more pasteuriser's licence has been issued this year than was the case in 1926, the bulk of milk so treated has increased in much greater proportion. This fact is explained partly by the absorption of many small milk retailers (who previously sold the milk untreated) by the large pasteurising firms and partly by the increased sale of milk in bottles. Thus milk previously untreated is now pasteurised, although additional pasteurisers' licences have not had to be issued—the firms in question being already licensed—whilst the increased demand for milk in bottles, which is slow but none the less steady, has caused the small retailer who has not the necessary facilities for bottling, to buy milk ready bottled from the licensed firms, which milk is in most cases already pasteurised. I am expecting an increase in the number of pasteurisers' licences in the near future, plans having already been passed for new dairy premises with the necessary pasteurising plant for at least two firms, and the buildings are now in course of construction.

As last year, samples have been taken fortnightly from all licensed premises with the same gratifying results, namely, that not one sample of pasteurised milk has been found to cause tuberculosis on laboratory examination. This fact still further convinces me of the wisdom of using efficient pasteurisation, under constant supervision, as a safeguard against infected milk.

There is still little increase in the demand for graded milk, mainly on account of the high price, which still remains prohibitive to the majority of consumers. However, one more dealer's licence for "Certified" milk has been issued during the year, and one firm has been licensed to sell Grade A (Tuberculin-tested) milk.

The standard of milk production on City farms remains high, regular veterinary supervision having been carried out. The number of City farms shows another decrease—and there is the certainty of a still further decrease next year—this being due to the extension of the housing estates on to the farm lands. The general health of the cows on the 53 farms remaining has been good, and no case of tuberculosis of the udder was found during 1927.

*Retail Milkshops.*—During the year the Milkshops Inspectors have carried out 5,136 inspections of dairies and milkshops, and have again affected a great improvement generally. Particularly has the improvement been shown in the small and often heavily-stocked "mixed" shops. Concentration on the avoidance of contamination of the milk by dust, etc., has been the keynote of the work of the Inspectors at these shops, with attention to the means of washing milk utensils, and, of course, to the general cleanliness of the premises.

It was found necessary in August of this year to summon a registered milk dealer, this being the first prosecution in Manchester under the Milk and Dairies (Consolidation) Act, 1915. The offence was "bottling milk in other than registered premises"—in this case the public highway—and no difficulty was found in obtaining a conviction. A nominal penalty only was asked for, as the case was taken up primarily with a view to warning other dealers of their liability to legal action for this offence.

The number of milkshops and dairies on the Register on December 31st, 1927, was 1,556, as against 1,954 on the previous December. Three persons and premises were removed from the Register during the year by resolution of the City Council on account of unsatisfactory conditions existing.

*Ice Cream.*—During the year 1,615 inspections were carried out by the Milkshops Inspectors at ice cream manufactories in the City.

The conditions under which ice cream is manufactured are not satisfactory on the whole, and the efforts of the Department are confined to obtaining cleanliness of the premises and utensils and to the prohibition of manufacture on premises where there is likelihood of contamination of the mixture. Unfortunately there is no obligation on the part of the manufacturer to register either himself or his premises, and the legislation at present existing does not meet the position. It is an encouraging sign, however, that the ice cream trade recognises this fact and is now agitating for the necessary legislation, and as the result of our operations many of them are putting their own houses in order—this, however, is a slow process.

The Department has again worked at high pressure throughout the year, and I am glad to further record my indebtedness to my staff for the way in which they have carried out their duties.

I wish specially to express my appreciation of the services rendered by Mr. Shenton, the Secretary of the Manchester, Salford, and District Milk Dealers' Association, during the year. I again had the honour of acting as one of the judges of the Clean Milk Competition organised by the Lancashire Milk Recording Society, and have to put on record my appreciation of the growing value of the work done by this Society. The movement, initiated by Mr. S. H. Renshaw, O.B.E., of Myerscough Hall, Garstang, has had a marked effect, and the general improvement evident in the milk supply in many districts of the County of Lancashire must be attributed in no small measure to the activities of this Society, and Mr. Renshaw in particular.

TABLE I.

<i>City Farms.</i>	
Total number of farms in City .. . . . .	53
Number of visits paid to City farms by Veterinary Officers.	222
,, cowsheds inspected .. . . . .	564
,, cows examined .. . . . .	3,994
<i>Country Farms.</i>	
Number of visits paid to country farms by Veterinary Officers .. . . . .	152
,, cowsheds inspected .. . . . .	424
,, cows examined .. . . . .	4,914
,, cows found with tuberculous udders .. . .	61
Number of samples taken from farms by Veterinary Officers	33
,, positive results of examination of farm samples.	14
,, cows slaughtered under Tuberculosis Order, 1925 .. . . . .	61

TABLE II.

## MILK SAMPLES.

Total number of samples taken by Inspectors for bacteriological examination .. . . . .	1,075
Collected by Food and Drugs Inspectors at—	
(a) Railway Stations .. . . . .	405
(b) Vehicles entering the City by road.. . . . .	316
Collected by Milk Shops Inspectors at—	
(a) Day Nurseries and Hospitals .. . . . .	45
(b) City Dairies and Railway Stations .. . . . .	309
Number of samples proved to cause tuberculosis .. . . . .	*91

\* This figure includes 24 control samples.

TABLE II.—continued  
MILK SAMPLES—continued

County	No. of Farmers represented by Samples of Milk	No. of Farmers sending Tuberculous Milk	Percentage
Cheshire .. . . .	340	48	14·11
Derbyshire .. . . .	108	5	4·62
Lancashire .. . . .	54	8	14·81
Staffordshire .. . . .	92	6	6·52
Yorkshire .. . . .	3	..	..
Westmorland .. . . .	4	..	..
Shropshire .. . . .	2	..	..
Lincolnshire .. . . .	1	..	..
Total .. . . .	604	67	11·09

TABLE III.  
ICE CREAM.

Number of persons on register—December 31st, 1927	.. . . .	476
„ visits by Milkshops Inspectors	.. . . . .	1,615
„ applications for permission to manufacture	.. . . .	34
„ applications to manufacture ice cream refused	.. . . .	34
„ premises in disrepair	.. . . . . . . . .	10
„ persons warned for dirty utensils	.. . . . .	91
„ „ „ dirty premises	.. . . . .	218
„ „ „ uncovered mixture	.. . . . .	43
„ „ „ dirty cloths over mixture	.. . . .	1
„ „ „ dirty clothing	.. . . . .	44

TABLE IV.

MILK AND DAIRIES (AMENDMENT) ACT, 1922.

MILK AND DAIRIES (CONSOLIDATION) ACT, 1915, AND ORDER.

Number of registered premises—December 31st, 1927 .. . . .	1,556
,, visits to dairies and milkshops by Milkshops Inspectors..	5,136
Total number of applications for registration .. . . . .	201
Number of applications approved by Committee .. . . . .	114
,, applications refused by Committee .. . . . .	57
,, applications withdrawn before consideration by Committee .. . . . .	30
,, persons struck off register by resolution of City Council..	3
,, persons found selling milk unregistered .. . . . .	147
,, milk vessels uncovered .. . . . .	96
,, milkshops found dirty.. . . . .	455
,, premises in disrepair .. . . . .	26
,, unsatisfactory washing accommodation .. . . . .	245
,, milk conveyances found dirty .. . . . .	7
,, milk conveyances found without name and address ..	3
,, milk purveyors found bottling milk in street .. . . .	3
,,       ,, warned by Committee .. . . . .	2
,,       ,, prosecuted .. . . . .	1

TABLE V.

MILK (SPECIAL DESIGNATIONS) ORDER, 1923.

Number of Licences issued during the year 1927.

Producer's licence to use the designation "Grade A" .. . . .	I
Dealer's licence to use the designation "Certified" .. . . .	6
Dealer's licence to use the designation "Grade A (Tuberculin tested)"	I
Dealer's licence to use the designation "Grade A" .. . . .	I
Dealer's licence to use the designation "Pasteurised"—	
(a) Pasteurising establishments .. . . . .	13
(b) Shops .. . . . .	2

The table completed to date from 1901 is inserted.

TABLE VI.

YEAR	Number of Farmers' Milk tested during the year	Total number found to cause Tuberculosis in the experimental animal	Percentage of Farmers sending Tuberculous Milk	Percentage of Farmers from EACH COUNTY whose Milk was found to cause Tuberculosis						
				Cheshire	Derbyshire	Staffordshire	Shropshire	Lancashire	Yorkshire	Manchester
1901	272	27	9.90	10.46	9.23	8.00	10.00	...	...	...
1902	345	36	10.40	12.72	8.65	4.01	...	8.31	...	...
1903	329	45	13.60	14.76	9.58	15.15	40.00	...	...	...
1904	318	29	9.10	11.17	6.02	...	...	7.14	25.00	...
1905	565	47	8.30	10.26	6.00	6.38	...	2.98	12.50	...
1906	542	42	7.70	8.60	6.50	9.30	12.50	4.00	...	...
1907	562	38	6.76	7.71	4.48	6.94	12.50	3.70	...	...
1908	289	27	9.34	11.56	6.25	7.70	...	2.94	12.50	...
1909	535	31	5.79	4.80	7.47	8.57	11.11	3.33	...	...
1910	468	30	6.41	6.20	8.69	5.55	...	...	...	...
1911	494	51	10.32	11.11	2.5	12.12	10.00	12.20	50.00	...
1912	484	54	11.15	12.94	4.00	10.20	33.33	6.00	10.00	...
1913	486	60	12.51	13.99	11.58	9.26	33.33	5.88	20.00	...
1914	352	34	9.66	12.39	8.19	...	...	2.77	...	...
1915	69	9	13.04	16.21	...	...	...	13.63	...	...
1916	321	38	11.83	11.59	8.80	13.04	...	6.97	...	...
1917	365	37	10.13	13.54	9.3	4.3	...	11.7	...	11.4
1918	288	18	6.25	8.17	5.12	4.16	...	3.57	...	2.63
1919	240	20	8.30	8.84	8.0	4.55	...	8.1	...	11.1
1920	194	29	14.94	18.75	10.71	...	...	5.88	...	...
1921	305	37	12.13	16.23	4.17	...	...	10.52	...	...
1922	243	21	8.64	10.52	6.34	6.66	...	3.57	...	...
1923	296	33	11.14	12.94	7.14	10.34	...	9.75	...	...
1924	453	43	9.49	10.80	8.69	8.82	...	5.12	...	...
1925	292	24	8.21	10.00	11.86	4.34	...	...	...	...
1926	474	49	10.33	12.26	11.76	6.94	...	5.76	...	...
1927	604	67	11.09	14.11	4.62	6.52	...	14.81	...	...
Total..	10185	976	9.58	—	—	—	—	—	—	—

TABLE VII.

SOURCE OF SAMPLES		NUMBER OF SAMPLES			COWS WITH TUBERCULOUS UDDERS		
		Primary and Subsequent	Control	Total	Positive Results	Number of Cows Examined	Slaughtered under Tuberculosis Order, 1935
By Food and Drug Inspectors	Primary	Railway Stations	..	362	43	405	*47
		Carts and City Dairies	..			..	..
By Milkshops Inspectors	Primary	Nurseries and Hospitals (Mixed)	..	268	48	316	†44
		Carts, City Farms, City Dairies, and Railway Stations	..	45	..	45	..
By Veterinary Officers	Primary	Individual	..	309	..	309	..
		Country Farms	Group	27	..	27	14
	Primary	Individual	..	6	..	6	..
		City Farms	Group	4	..	4	..
Totals		..	..	1017	91	1108	105
						374	8,908
						61	61
						II	II

\* Includes 14 control samples found positive.  
 † Includes 10 control samples found positive.

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## SPECIAL REPORTS

BY THE

MEDICAL OFFICER OF HEALTH.

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## HOUSING REQUIREMENTS OF THE CITY.

Public Health Office,  
Manchester.

To the Public Health Committee.

The Medical Officer of Health begs to submit this supplementary report on the housing need of the City at September 30th, 1927. For the sake of clearness the report is given in the form of separate statements, each dealing with its own aspect. These sections require no further individual comment.

The report is presented in the following sections :—

- (A) Overcrowding.
- (B) Type of house required.
- (C) Comparison of applications for houses and of houses built.
- (D) Ability of families living in overcrowded conditions to pay rentals of Corporation houses.
- (E) Estimated immediate housing need at the end of September, 1927
- (F) Housing of persons over 50 years of age.

There is little definite evidence of a reduction of overcrowding in the City.

In so far as the type of house required is concerned, the evidence is very strong as to the need for the cheaper class of house. This evidence is to be found in the sections dealing with the type of house required, and the ability of persons to pay the municipal rentals. The actual figures are that 80 per cent. should be of the A type and the remaining 20 per cent. of the B type. Of the A houses, the figures indicate that these, on an arithmetical basis, should be 50 per cent. A2 and 30 per cent. A3. It is probably inadvisable, however, to have such a large proportion of A2 type, since houses with only two bedrooms are likely to become overcrowded by the natural growth in number of the inhabiting families.

The municipal housing provision of the City has not as yet taken cognisance of the need for clearance of slum areas, nor has it permitted of the ordinary routine work in dealing with individual unfit houses, or small groups of such houses. The high rates, both of sickness incidence and of mortality, in the denser parts of the City, make it imperative in the interests of public health that this work should be resumed.

The ability to pay the rents of municipal houses has been carefully investigated. This enquiry entailed a very large amount of work to ensure a reasonable degree of accuracy in judgment. Incomes of the families concerned were obtained and checked from all sources available, e.g. :—

- (a) Ministry of Labour.
- (b) Various Trade Boards Acts.
- (c) Police and Education Departments.
- (d) Railway Companies.
- (e) Corporation Labour Office, etc.

The results were also checked by direct comparison with the basis of letting in the Housing Section of the Public Health Department.

The estimate, therefore, of capacity to pay is based upon the most reliable returns obtainable, and would appear to be a true index of the ability on the part of the populace to pay these rents.

The section of the report dealing with the housing of people over 50 years of age is one which is specific in its relation to one section only of the population. The proposal is worthy of serious consideration for the reasons given in that section.

R. VEITCH CLARK,

*Medical Officer of Health.*

**(A) Overcrowding.**

In the report presented in 1925 several methods of estimating overcrowding were recorded. In estimating during the year 1927 the overcrowding still existent, only one of the methods had been adopted, inasmuch as checking these estimates from various other sources has shown that this method now described is reliable. The analysis which has been made for the purpose of this present report, therefore, is one of 1,000 houses, the details of which are obtained from the infectious diseases enquiry sheets. The sheets taken were those of the first thousand cases of notifiable infectious diseases occurring in 1927. A complete analysis of the conditions of this housing was made, and a few of the tables are shown in the section of this report dealing with the type of house required. The total number of overcrowded houses in the thousand was found to be 270. Certain correcting factors were applied to this figure, and the proportionate number of overcrowded houses occurring in the City based upon the number of inhabited houses in the City was then estimated. This estimate gives a return of 18,858 overcrowded houses in Manchester in 1927 as against the figure of 20,000 in 1925. On these figures there is apparent a slight reduction in the overcrowding in the City, as might be expected from the number of houses built. A comparison with the returns of overcrowding in the City as revealed by house-to-house inspection in the City over the period of years 1919 to 1926 shows that the yearly estimated return varies between 19,000 and 20,000, this variation being obviously due to variations in the types of houses which have been inspected. We are, therefore, not entitled to say that there is a reduction in overcrowding, although the tendency appears to be in that direction.

Overcrowding is more likely to be definitely reduced with the increased ratio of the cheaper type of house arranged for in the present housing schemes of the Corporation.

**(B) Type of House Required.**

*Tables I., II., III., IV.*

(These results are derived from the detailed analysis of the 1,000 infectious disease enquiry sheets referred to in Section (A) Overcrowding.)

Tables I., II., and III. give the facts of overcrowding in houses of two rooms, three rooms, and four rooms.

Table IV. shows that the greatest proportion of overcrowding occurs in houses of not more than two bedrooms, the figures actually being 210 cases in that group and 60 cases in houses of three or more bedrooms.

The best of these houses consists of two bedrooms, a living room, and kitchen-scullery, and number of rooms corresponds to the A2 type of new house. We are therefore dealing with the needs of the populace for the A type of house in this paragraph. From these sheets (Tables I., II., and III.) it will be seen 161 out of 210 cases of overcrowding can be abated by the addition of one bedroom, or approximately 77 per cent. of these cases can be so provided for. This represents 60 per cent. of the total cases of overcrowding, and can be met by the provision of a house of two or three bedrooms of the A types. Those figures represent such a great mass of overcrowding that it is almost unnecessary to look at the remaining group for the moment, inasmuch as the big need is obviously the provision of A2 and A3 houses, and there will always be a certain proportion of larger-sized houses intermingled in the housing estates.

The worst cases of overcrowding also occur in these houses. The big problem is the small house.

The total number of A type of house therefore required to abate overcrowding in the City is 60 per cent. of 11,000 (the figure originally estimated

in 1925) = 6,600. This is a minimum figure, as the estimate of 11,000 houses is a very conservative one.

The abbreviations in the following tables indicate : F. = family ; L. = lodgers.

Table I.

Two-roomed Houses	Not overcrowded		Overcrowded	
	One F.	F. & L.	One F.	F. & L.
	5	Nil.	10	1
No. of houses .. .. .. .. ..	5	Nil.	10	1
No. of bedrooms .. .. .. .. ..	5	..	10	1
No. of adult males .. .. .. ..	7	..	14	..
No. of adult females .. .. .. ..	3	..	13	3
No. of children under 10 years of age	3	..	21	1
Total occupants ..	13	Nil.	48	4
No. of houses overcrowded—				
Registrar-General's standard .. .. .. ..	..	..	6	..
Manchester standard .. .. .. ..	..	..	9	1
Social standard .. .. .. ..	..	..	7	..
Causes of overcrowding—				
Large family .. .. .. ..	..	..	10	..
Lodgers .. .. .. ..	..	..	..	1
Lodgers over 60 years of age .. .. .. ..	..	..	..	..
No. of houses requiring—				
One additional bedroom .. .. .. ..	..	..	8	1
Two additional bedrooms .. .. .. ..	..	..	2	..
Three additional bedrooms .. .. .. ..	..	..	..	..

Table II.

Three-roomed Houses	Not overcrowded		Overcrowded	
	One F.	F. & L.	One F.	F. & L.
	39	5	12	5
No. of houses .. .. .. .. ..	39	5	12	5
No. of bedrooms .. .. .. .. ..	78	10	24	10
No. of adult males .. .. .. ..	47	6	25	10
No. of adult females .. .. .. ..	49	11	32	13
No. of children under 10 years of age .. .. .. ..	75	7	18	13
No. of total occupants .. .. .. ..	171	24	75	36
No. of houses overcrowded—				
Registrar-General's standard .. .. .. ..	..	..	6	3
Manchester standard .. .. .. ..	..	..	7	4
Social standard .. .. .. ..	..	..	8	4
Causes of overcrowding—				
Large family .. .. .. ..	..	..	12	1
Lodgers .. .. .. ..	..	..	..	5
Lodgers over 60 years of age .. .. .. ..	..	..	..	3
No. of houses requiring—				
One additional bedroom .. .. .. ..	..	..	11	3
Two additional bedrooms .. .. .. ..	..	..	1	2
Three additional bedrooms .. .. .. ..	..	..	..	..

Table III.

Four-roomed Houses	Not overcrowded		Overcrowded	
	One F.	F. & L.	One F.	F. & L.
No. of houses .. .. .. .. ..	256	45	113	69
No. of bedrooms .. .. .. .. ..	521	94	226	141
No. of adult males .. .. .. .. ..	313	66	280	162
No. of adult females .. .. .. .. ..	337	90	267	183
No. of children under 10 years of age ..	455	65	240	156
No. of total occupants .. .. .. .. ..	1,105	221	787	501
No. of houses overcrowded—				
Registrar-General's standard .. .. .. .. ..	..	..	20	11
Manchester standard .. .. .. .. ..	..	..	92	65
Social standard .. .. .. .. ..	..	..	81	47
Causes of overcrowding—				
Large family .. .. .. .. ..	..	..	113	15
Lodgers .. .. .. .. ..	..	..	..	69
Lodgers over 60 years of age .. .. .. .. ..	..	..	..	23
No. of houses requiring—				
One additional bedroom .. .. .. .. ..	..	..	97	41
Two additional bedrooms .. .. .. .. ..	..	..	16	27
Three additional bedrooms .. .. .. .. ..	..	..	..	1

Table IV.

## Relative overcrowding by "One Family" and by "Family and Lodgers."

Total No. of Houses overcrowded out of the 1,000 analysed = 270	*In houses with not more than 2 bedrooms—210	{ By 1 F.—135, or 64·3% By F. & L.—75, or 35·7%
	†In houses with 3 or more bedrooms—60	{ By 1 F.—23, or 38·3% By F. & L.—37, or 61·7%

\* Houses with two bedrooms or less numbered 560.

† Houses with three bedrooms or more numbered 440.

(c) Comparison of Applications for Houses and of Houses actually Built by the Corporation.

APPLICATIONS ON LISTS, SEPTEMBER 30TH, 1927.

	A2	A3	B3	B4	Total
Numbers .....	4,174	3,769	2,499	471	10,913
Percentage .....	38·2	34·4	22·9	4·3	

This table, it will be seen, gives the applications for each type of house on the books at the end of September, 1927. We have, therefore, at the moment (September 30th, 1927) 10,913 applications for houses ; 72·6 per cent. of these applications are for houses of the A type and 27·2 per cent. are for the houses of the B type.

*Comparison of Applications, etc.*

These figures are true for the total applications on the list but do not at all represent the real total demand, neither do they show correctly the proportional demand for the various types of house. This is due to the fact that certain of the lists have been closed to applicants for the smaller houses while they have been kept open to applicants for the larger houses. This closure was effected because the rush of applicants for the small house was much greater than could be met by the supply of this type of house. Many persons also apply when the lists are closed, and are, in consequence, not registered, who would have been registered had the lists been open.

The following table shows the applications received recently in two estates when the lists were kept open for all types of house for the period stated :—

Period	Estate	Applications			Total
		A2	A3	B3	
May to Nov., 1927	Kingsway . . .	1,349	808	492	2,649
June to Nov., 1927	Gorton Extension .	967	621	254	1,842
	Totals . .	2,316	1,429	746	4,491

Percentages. . . . .      51·6      31·8      16·6

These percentages represent more truly the demand made for the different types of houses.

## HOUSES COMPLETED (SEPTEMBER 30TH, 1927).

	A2	A3	B3	B4	Total
Numbers . . .	804	2,953	3,241	262	7,260
Percentage . . .	11·1	40·7	44·6	3·6	

Of the houses built, 51·8 per cent. are of the A type and 48·2 per cent. of the B type. The serious discrepancy between demand and supply is the very small proportion of A2 houses in those already built. These proportions will be altered soon, owing to the present house building policy of supplying a larger proportion of the houses of the A type.

*Conclusions.*

- (1) There is no noticeable slackening of the demand for houses to let.
- (2) Much the greatest demand is for the A type of house. This is probably largely determined by inability to pay the higher rents.
- (3) On the basis of demand and supply, the proportion of A houses being built should be increased.

## (D) Ability of Families Living in Overcrowded Conditions to Pay Rentals of Corporation Houses.

(The calculations in this section relate to 327 families—living in houses under overcrowded conditions, or in houses containing three or more lodgers, who represent families requiring housing accommodation—whose cases were individually examined.)

The overcrowded families have been divided into two groups—

- (a) Those who can pay for the accommodation required.
- (b) Those who cannot pay for the accommodation required.

The assessment of ability to pay has been based upon the Atwater Scale of family maintenance, with due allowance made for change in cost of living. The rentals quoted are those of Corporation houses having two, three, or four bedrooms.

There are eight cases each requiring five bedrooms and one case requiring six bedrooms to abate the overcrowding. In these nine cases the family income is such as to enable the rent to be paid for a house of the requisite size, but for which, of course, municipal housing does not cater.

In all cases the income is the total family income. Each case has been considered individually as if actually an application for a house. On purely financial grounds the classification indicates the suitability of these people as tenants—no other qualifications or disqualifications in this instance being considered.

The subjoined table shows the facts which have been so determined. The nine cases requiring larger houses than are built by the Corporation have been excluded from the table:—

Type of house required	Rent charged by the Corporation s. d.	Number of families able to pay such rent	Number of families unable to pay such rent	Total number of families
A2	12 8	116	54	170
A3	15 10	86	37	123
B4	23 8	33	1	34
		235	92	327
		= 71·9%	= 28·1%	

This table embraces—

- (1) Overcrowded houses occupied by one family.
- (2) Overcrowded houses occupied by one family, plus lodgers.
- (3) Houses still overcrowded by "family" after "lodgers" have been removed.
- (4) Houses, not overcrowded, containing three or more lodgers who represent families requiring housing accommodation.

Expressed in percentages, the results are as follows:—

A2 houses—68·2 per cent. of the families can pay the Corporation rental.

A3 houses—70 per cent. of the families can pay the Corporation rental.

Both groups of A house—68·9 per cent. of the families can pay the Corporation rental.

In the case of B houses practically all the families requiring such accommodation can pay the Corporation rental.

*Note.*—From an analysis of the applications actually received in the Housing Section, it has been ascertained that in approximately 24 per cent. of the cases investigated the applicants were not in a position to pay the rental of the house they applied for.

(E) Estimated Immediate Housing Need at end of  
September, 1927.

Number of houses needed at end of 1926 . . . . .	17,632
Add number of houses needed for normal increase of population from January 1st, 1927, to September 30th, 1927 . . . . .	577
	18,209
Deduct number of houses built by the Corporation between July, 1925, and September, 1927 . . . . .	2,655
	15,554

In addition to the 2,655 houses which have been built by the City Council, 4,109 houses have been built by private enterprise. This would give, on purely arithmetical grounds, the net housing needs at 30th September, 1927, as 11,445 houses. It would be incorrect, however, to look upon this 11,445 as the figure which indicates the housing needs of the City at 30th September, inasmuch as in no part of the estimate of housing requirement has there ever been a figure put in for that part of the housing demand arising from newly-made marriages. No reliable data have hitherto been available to enable an estimate of this need to be made. Figures which have now been obtained show that approximately 50 per cent. of the houses built by private enterprise are occupied by newly-married couples. This section of the housing demand has therefore always to be borne in mind, and, on the 50 per cent. basis, 2,054 of the privately-built houses are so occupied. These cases are balanced by the newly-married couples who go to live with their relations in-law, and, in consequence, the overcrowding of the City is unaffected by this section of the housing provision made, and, so far as the housing need is concerned, these 2,054 houses may therefore be disregarded in the calculation.

This leaves a balance of privately-built houses of 2,054, but the privately-built house is, generally speaking, financially beyond the reach of those persons who constitute the overcrowded group of the population, and from a knowledge of the housing conditions in the City, and all the facts which have formed the basis of this and other housing reports, to credit 50 per cent. of these houses to the relief of overcrowding is a generous allowance. We are therefore left with the figure of 1,027 to deduct from the figure of 15,554, which gives a final figure of 14,527.

The Committee are therefore of opinion that a reasonable statement of the housing need of the City at September 30th, 1927, is 14,527.

### *Estimated Housing Need at the end of 1936.*

Number of houses needed at end of September, 1927	.. ..	14,527
Add number of houses needed for normal increase of population from 30th September, 1927, to 31st December, 1927	.. ..	193
Add number of houses needed for normal increase of population from 1st January, 1928, to December 31st, 1936	.. ..	6,930
		-----
		21,650
Add number of houses required by 1936, to meet demolition of those now below a reasonable standard of fitness	.. ..	26,000
		-----
Total	.. .. .. .. .. .. .. .. .. ..	47,650

(F) An Examination of the Housing Conditions in the City, in relation to overcrowding caused by people over 50 years of age residing with other families, showing the percentage of such houses overcrowded, and the possibility of relief to overcrowding by the provision of houses of a special type.

The Medical Officer of Health begs to submit a report on the housing conditions of people over 50 years of age, residing as lodgers either with relatives or with families who are not related to them. The age of 50 years has been taken as the minimum, in view of the object of this enquiry. It may generally be assumed that, on the average, people over 50 years of age are beyond the ordinary ages of reproduction, and that, therefore, in considering the housing provision required for such people there is no need to take into account the possible increase of tenants, as is the case in growing families. It will be seen from the details of the report that a considerable amount of overcrowding exists on account of the presence of this group of the population as lodgers in houses. If, therefore, special provision could be made in housing for the accommodation of such people, there is no doubt that a definite step would thereby be taken to diminish overcrowding in the City.

The type of house referred to here is one which would require careful consideration, before final decision as to actual building was reached. Childless couples, or single individuals of mature years, obviously do not require the same amount of room as growing families. The type of tenancy, therefore, in view at the present moment is a two-roomed tenancy, consisting of living-room and bedroom, or even a single-roomed tenancy, consisting of a large combined bed-living-room. It is clear that those would have to be built—if they were provided—in the form of flats, but the exact arrangements and the numbers of the tenancies in each section of the building is a matter which has to be left at the present for future consideration. There is, however, in this proposal, no departure intended from the principles underlying the new housing schemes. This proposal is to be looked upon as a special provision for a special need.

#### *Lines of Enquiry.*

- (a) In the first instance 1,000 infectious disease sheets have been examined and figures relating to overcrowding by people of the lodger class over 50 years of age have been extracted.
- (b) Secondly, the effect of the passing of the first Old Age Pensions Act, 1909, upon the members of aged indigent people resident in the Manchester Institutions or in receipt of outdoor relief is here shown, and
- (c) Thirdly, the present numbers of indigent people over 50 years of age receiving out-door relief and resident with other families, have been obtained.

#### *(a) ANALYSIS OF 1,000 HOUSES.*

Of the 1,000 houses examined 146 (or 14·6 per cent.) contained persons over 50 years of age as lodgers. Of these 146 houses 48 were overcrowded by the presence of these persons. On the 1,000 houses this is an overcrowding percentage of 4·8, and on the 146 houses containing lodgers is an overcrowding percentage of 32·9.

*Facts as to Lodgers over 50 years of age in these 146 houses.*

	Ages between 50 and 70 years	Over 70 years of age
Married couples . . . . .	31	1
Single persons . . . . .	80	34
Totals . . . . .	111	35

*(b) OLD AGE PENSIONS ACTS.**(1) Indoor Relief.*

In order to see what bearing the passing of the Old Age Pensions Act, 1909 had upon the reduction of the number of persons resident in the Manchester Workhouses by reason of such people being enabled to maintain themselves in lodgings or in houses of their own, recourse has been had to the Annual Reports on the Health of the City of Manchester from 1900 to 1925. These reports, whilst not separating the recipients of relief into age groups show that the number of those receiving indoor relief in 1909 was 3,875 per week and that this number progressively declined until 1914 when it stood at the figure of 3,414 per week, which means that there were 461 persons in receipt of relief less in 1914 than in 1909.

*(2) Outdoor Relief.*

The figures relate to the same years. In 1909, 2,049 persons per week were in receipt of assistance. There are no figures available to show the ages of these persons, but it is a matter of common knowledge that a very considerable proportion of persons in receipt of outdoor relief are always to be found in the age groups over 50 years.

By 1913 the figure had decreased to 685.

Therefore it will be observed that after the passing of the Old Age Pensions Act in 1909 the indoor residents and those in receipt of out-door relief were considerably reduced in number for the first five years after the passing of the Act. Since 1913 and 1914 this reduction has been entirely obliterated, the numbers in receipt of forms of relief having risen very greatly. This rise is due to factors having no relationship to the operation of the Old Age Pensions Act.

*(c) PRESENT POSITION OF RELIEF TO PERSONS OVER 50 YEARS OF AGE.*

Mr. Greenhalgh (the Clerk to the Guardians) has kindly furnished me with the following information as to persons over 50 years of age in receipt of outdoor relief on 1st January, 1927, who have no children with them, and who are living in houses in which there are other residents:—

Total number of cases . . . . .	3,247
---------------------------------	-------

*Married Couples.*

Ages between 50 and 70	Ago 70 years or over	Total
386	101	487

In all these cases rent allowances are made by the Guardians up to 10s. per week, the average payment being 8s. per week. On this basis the rent charge net by the City Rates exceeds £10,000 per annum.

*Single Persons, Widows, and Widowers.*

Men		Women		Total
50—70	Over 70	50—70	Over 70	
540	192	1,529	499	2,760

These people likewise are receiving rent allowance up to a maximum of 10s. per week.

Assuming however that the rent allowance for a single person is half that for a married couple, that is 4s. per week per person, the cost to the City would be £28,704 per annum.

The housing of this class presents a different problem from that of the married couple.

If we add together the total rental allowances of these two groups we get a sum of £38,000. If this sum be capitalised it obviously would meet the cost of a very large housing provision of the type required. At present these rental allowances so paid by the Guardians are in turn paid by the recipient to those who let the rooms. The suggested provision would mean that the Corporation would receive the Guardians' allowances in payment of the rent, and this would in very large measure, if not entirely, meet the capital charges of the houses. The local authority would therefore benefit permanently in that it would have the asset of the houses, and the rental allowances would contribute to the capital charges, if not actually meet them, while overcrowding would be lessened, and the health of the public thereby improved.

It is important to note that no information is available as to the numbers of such elderly couples or single persons as are referred to in this report, who would be either willing or able to move into accommodation of the type proposed. It would therefore be necessary to look upon the first step of such housing accommodation as an experiment alone, so that some idea might be obtained of the demand by this special group of the population for such accommodation.

Actual information of the amount of overcrowding caused by these indigent people residing with other families is not available, but, applying the results found on the examination and analysis of 1,000 similar cases, it is probable that overcrowding would exist in 1,068 out of the 3,247 cases referred to in paragraph (c).

Married couples and single persons in the 1,000 houses dealt with in the first portion of this report, and those under the care of the Guardians, are all of the lodger class. There is, however, a considerable number of aged people who are not indigent, who are residing in houses too large for their present means, and who would no doubt be ready to avail themselves of the smaller type of house if such facilities were afforded. This in turn would release some houses for occupation by larger families.

## MANCHESTER AND DISTRICT REGIONAL SMOKE ABATEMENT COMMITTEE.

The chief work of the year has been the reconstitution of the Regional Committee as an Advisory Committee, consideration of the Public Health (Smoke Abatement) Act, 1926, and experiments and reports on smokeless fuel for domestic purposes. Various other minor matters have been dealt with.

The number of authorities in the area is 102, and of these 72 have definitely joined the Committee.

The following authorities have joined :—

### COUNTY BOROUGHHS.

Manchester	Stockport
Salford	Rochdale
Bolton	Warrington
Oldham	Bury

### MUNICIPAL BOROUGHHS.

Leigh	Stalybridge
Eccles	Todmorden
Ashton-under-Lyne	Bacup
Hyde	Glossop
Rawtenstall	Dukinfield
Heywood	Haslingden

### URBAN DISTRICT COUNCILS.

Stretford	Turton
Swinton and Pendlebury	Hazel Grove and Bramhall
Farnworth	Irlam
Chadderton	Kearsley
Radcliffe	New Mills
Altringham	Milnrow
Newton-in-Makerfield	Urmston
Prestwich	Ashton-on-Mersey
Denton	Audenshaw
Royton	Little Hulton
Failsworth	Abram
Westhoughton	Golborne
Horwich	Bollington
Tyldesley	Little Lever
Sale	Lymm
Crompton	Springhead
Ramsbottom	Lees
Worsley	Norden
Droylsden	Alderley Edge
Saddleworth	Bowdon
Littleborough	Yeardsley-cum-Whaley

## RURAL DISTRICT COUNCILS.

Runcorn	Leigh
Bucklow	Bury
Chorley	Limehurst
Chapel-en-le-Frith	Hayfield
Warrington	Glossop Dale

together with the County Councils of Lancashire and Cheshire.

The following authorities have not joined :—

## MUNICIPAL BOROUGHS.

Darwen	Middleton
Macclesfield	Mossley
Chorley	

## URBAN DISTRICT COUNCILS.

Hindley	Marple
Ashton-in-Makerfield	Marsden
Ince-in-Makerfield	Knutsford
Atherlon	Billinge
Cheadle and Gatley	Adlington
Hale	Wardle
Bredbury	Blackrod
Whitworth	Hollingworth
Wilmslow	Conistable
Whitefield	Handforth
Tottington	

## RURAL DISTRICT COUNCILS.

Macclesfield	Barton-upon-Irwell
Disley	Tintwistle

The following table summarises the position at June, 1928 :—

	No. in Area	Joined Advisory Committee	Population	Not Joined	Population
County Boroughs	...	8	1,685,000	...	...
Municipal Boroughs	...	17	365,100	5	146,300
Urban District Councils	...	63	569,600	21	195,900
Rural District Councils	...	14	142,200	4	75,000
	102	72	2,761,900	30	417,200

The rules as to the constitution of the Committee are as follow :—

- (1) The Committee shall be known as the " Manchester and District Regional Smoke Abatement Committee."
- (2) The Committee is a voluntary association of local authorities in the Manchester and district area established as an advisory body for the purpose of improving the control of and reducing the smoke nuisance in the area represented.
- (3) All local authorities in the Manchester and District Area are eligible for representation on the Committee.
- (4) The Committee shall be formed from representatives of the adhering local authorities elected on the basis of the population, viz. :—
  - Local authorities over 100,000 population—  
Four representatives each.
  - Local authorities under 100,000 population—  
Two representatives each.
  - County Councils—  
Four representatives each.  
Each representative shall have a vote.
- (5) The Committee shall elect a Chairman, Deputy-Chairman, and Executive Committee.
- (6) The Medical Officer of Health for Manchester shall be the Honorary Secretary of the Committee.
- (7) The meetings shall be held in Manchester on the following dates :—
  - (a) The full Committee in the months of May and November at 3-30 p.m.
  - (b) The Executive Committee in the months of March, June, September, and December at 3-0 p.m., or oftener if necessary.
- (8) The Executive shall consist of three members respectively elected by representatives of the—
  - (a) County Boroughs,
  - (b) Municipal Boroughs,
  - (c) Urban District Councils,
  - (d) Rural District Councils,
  - (e) County Councils,
 together with Chairman, Deputy-Chairman, and Honorary Secretary of the Regional Committee.
- (9) The delegates shall be elected annually by the local authorities in time for the May meeting. The year of the Regional Committee for financial and other purposes shall be from April 1st to March 31st.
- (10) Each local authority represented on the Regional Committee shall pay a subscription of one guinea annually—payment to be made to the Honorary Secretary.
- (11) The Committee shall have power to co-opt any person or persons whose special qualifications would be of use to the Committee.

The City Treasurer of Manchester (Mr. J. E. Bray) has kindly consented to act as Honorary Treasurer to the Committee.

At the meeting of the Regional Committee held on the 29th November the Chairman briefly outlined the work of the Executive Committee since the last meeting, pointing out that the questions of the new constitution of the Committee as an Advisory Committee, and the framing of bye-laws under the Smoke Abatement Act, had been dealt with by Sub-Committees. He also referred to the three important matters which had already been decided, viz.:—

- (1) Patrol system of inspection.
- (2) Standard definition of black smoke.
- (3) Time concession.

#### PUBLIC HEALTH (SMOKE ABATEMENT) ACT, 1926.

At the meeting of the full Committee on the 29th November it was reported that there were three bye-laws which had been considered by the Sub-Committee, two of which were put to the meeting.

The first bye-law was on the lines of the model one which had been issued by the Ministry of Health, but with an important extension, and it had been framed in accordance with the recommendation of the Committee—

##### BYE-LAW No. 1.

“That a chimney (not being the chimney of a private dwelling-house) sending forth black smoke or smoke (notwithstanding that it is not black smoke) of such colour density or content that light cannot be seen through it as it issues from a chimney for a period of two minutes in the aggregate within any continuous period of thirty minutes shall until the contrary is proved be deemed to be a nuisance.”

This was approved, together with the following bye-law:—

##### BYE-LAW No. 2.

“That a chimney (not being the chimney of a private dwelling-house) sending forth soot ash grit and gritty particles or any one or more of them shall until the contrary is proved be deemed to be a nuisance.”

#### BYE-LAWS AS TO NEW BUILDINGS.

The difficulty of framing bye-laws under this heading was pointed out, and it was agreed that the matter be deferred for consideration by the Executive Committee.

#### MODERATE SMOKE.

The question of moderate smoke has been under consideration, but it was decided that the matter be left in abeyance for the present, as it was considered that under existing conditions there is sufficient work to be done in dealing with dense smoke.

### JOINT ACTION BETWEEN SMALLER AUTHORITIES IN THE AREA.

This matter has been before the Committee, but in view of the expression of opinion at the last meeting of the Regional Committee that the time was hardly ripe for joint action it was decided that no definite action be taken. Some co-operation, however, is necessary for the satisfactory carrying out of smoke nuisance inspection by, at any rate, the smaller authorities.

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### MANCHESTER COMMITTEE ON CANCER.

The scheme of work initiated by the Manchester Committee on Cancer in 1926 has proceeded actively during the year, and satisfactory progress has been made.

#### *Experimental Research.*

The Committee's main line of experimental research is the study of the cancer-producing capabilities of lubricating oils used in the cotton-spinning industry with the object of discovering the origin, and thereby the means of prevention, of mule spinners' cancer—a form of the disease that is closely associated with the Lancashire cotton industry.

The work is carried out at the University under the direction of Dr. C. C. Twort (the Pathologist to the Committee), who is assisted by an expert chemist (Dr. J. D. Fulton), a Zoologist, and the necessary laboratory staff.

A joint report has been prepared by Dr. C. C. Twort and Dr. H. R. Ing (formerly chemist to the Manchester Committee on Cancer) on the work done during the year ended April 30th, 1928, and this will be published at an early date. Some of the most interesting results obtained are as follows :—

Cancer has been produced in mice by the application to the skin of petroleum lubricating oils actually used in cotton mills.

Petroleum lubricating oil obtained from the waste boxes after use on the spindles was found to be no more toxic than the same oil before use.

A shale lubricating oil was found to be many times more dangerous from a carcinogenic point of view than petroleum oil.

A lubricating oil consisting of sperm oil appeared to be harmless.

The carcinogenic properties of some toxic oils have been very greatly reduced by treatment with sulphuric acid.

A synthetic tar has been prepared which is thirty times more carcinogenic than the ordinary lubricating oil used in cotton mills—a discovery which leads us reasonably to hope that we are on the track of the active carcinogenic agent in lubricating oils.

A fuel binder the basic constituent of which was bitumen proved to be relatively harmless as compared with pitch—a discovery which shows that cancer would be less likely to occur amongst persons engaged in the manufacture of coal-dust briquettes if bitumen were used as a fuel binder instead of pitch.

*Statistical Research, Histological Records, After-care and Follow-up of Cancer Cases.*

The two whole-time Special Investigation Officers (Dr. Gretta M. Wardle and Dr. John Murray) are at present engaged in establishing a proper system of following-up and case record-keeping in cases of cancer treated in two of the largest hospitals in the City—the Manchester Royal Infirmary and St. Mary's Hospital for Women. This includes the collection of specimens for histological examination and the regular observation of cases of cancer, so that any recurrence of the growth may be recognised at once and the patient immediately referred for suitable treatment.

The histological examination of specimens collected by the Special Investigation Officers is carried out at the Manchester University by an expert in this work who is a part-time official of the Committee. Such an examination is necessary for the assured diagnosis of the disease, and should result in an increased efficiency in the provision for cancer treatment in the City.

*Propaganda.*

The Manchester Committee on Cancer is the responsible body in the City for informing the public adequately on the subject of cancer. Its principal activity in this direction recently has been the publication in book form of the post-graduates' lectures given to medical practitioners during the session 1926-27 on various aspects of the cancer problem. These have been sent free of charge to each medical practitioner in South-east Lancashire.

*Other Publications.*

"Mule Spinners' Cancer and Mineral Oils." Dr. C. C. Twort and Dr. H. R. Ing. ("Lancet," April 14th, 1928.)

"Research on Carcinogenic Agents." Dr. C. C. Twort and Dr. H. R. Ing. (To be published in the "Krebsforschung.")

"Incidence of Intrathoracic Tumours in Manchester." Dr. J. B. Duguid. ("Lancet," July 16th, 1927.)

Report of the Manchester Committee on Cancer for the years 1925, 1926, and 1927.

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